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Building Resilience Through A Positive School Climate

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BUILDING RESILIENCE THROUGH A POSITIVE SCHOOL CLIMATE

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ABSTRACT

BUILDING RESILIENCE THROUGH A POSITIVE SCHOOL CLIMATE

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Dissertation supervised by Kara McGoey, Ph.D.

The aim of the present study is to explore the potential for schools to promote resilience and protective factors through a positive school climate and a focus on school connectedness. Data from the California Healthy Kids Survey was used to analyze differences between children who reported high versus low school climate and school connectedness, and their reported levels of resilience based on four traits: empathy, problem-solving skills, self-awareness, and self-efficacy. The research questions addressed in the present study are: Is there a difference between students with different levels school climate perception when examining resilience-linked traits? And is there a difference between students with different levels school connectedness perception when examining resilience-linked traits? The results of the present study indicate that student perception of school climate, and student perception of school connectedness, contribute to the development of resilience in a statistically significant and meaningful way. The implications of these results are explored, as well as possible avenues for future research and how a focus on school climate and school connectedness can guide educational principles and practice.

DEDICATION

This paper is dedicated to my mother, for teaching me the importance of hard work and perseverance.

And to my dog, Eli, for being a good boy.

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I would like to thank my mom and dad supporting me throughout graduate school and throughout life. A special thanks to Blythe, Kristen, Lindsey, and Jim for being great friends. And to my professors, particularly Dr. McGoey, Dr. Graves, and Dr. Kanyango, for assisting me throughout this process. Lastly, thank you WestEd and the California Department of Education for allowing me to use your data for this study.

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Introduction

While childhood is often thought of as a relatively carefree period in a person's life, there are many children in the United States and across the world that face hardship and challenges despite their young age. Many children face emotional and physical trauma before they are ready to handle these challenges effectively. More specifically, large numbers of children in the United States face poverty, malnutrition, physical and emotional abuse at home, bullying at school, and countless other types of adversity. Individual and family circumstances play a large role in whether or not children face these risks. However, children also spend nearly as much time in school as they do in their home and community. School is a critical component in a child's life, and where a large part of growing emotionally, socially, and cognitively, takes place. When a child struggles outside of school, the effects can bleed into their school experience, and vice-versa. There continue to be positive efforts made towards ameliorating the difficulties that children face once the hardships have occurred. Yet, not enough attention is being paid towards preventative measures.

Schools across the country have progressed in their ability to meet many children's needs early with movements such as Response to Intervention and School-Wide Positive Behavioral Interventions and Supports. Additional focus has been placed on the school environment itself, both in terms of how children perceive their school, as well as student-student relationships and student-adult relationships. This push for a more positive school climate has numerous benefits (Klem, A, & Connell, J, 2009; McNeely, C, & Nonnemaker, J., 2002; Cohen, J, McCabe, L., Michelli, N, & Pickeral, T., 2009). A focus on building resiliency in students is an important measure and preventative action to help buffer children against the hardships that they face both

inside and outside the school can drastically improve their chances of developing into healthy and competent adults, despite and risks and challenges they face.

Struggles of Children and Adolescents

The struggles of late childhood and adolescence are a common area of research in many different fields, and for good reason. Adolescence is an especially difficult period for most people, regardless of culture, race, or ethnicity. It is during this time that people begin puberty, become increasingly aware and self-conscious of their body image and social status, and develop both their gender as well as cultural identities. Many teenagers begin to experiment with drugs, sex, and alcohol as pressure to succeed increases. The toll that these challenges can take on children and adolescents is severe. According to the statistics released in 2007 by the Center for Disease Control, there has been a sharp rise in the teen suicide rate in the United States over the past fifteen years, with increases of 76 percent in girls age 10 to 14, 32 percent in girls 15 to 19, and 9 percent in boys aged 15-19 (Denoon, 2007). As these statistics indicate, both children and adolescents are faced with increasing risk of depression and suicide. Additional stressors include potential bullying, abuse, eating disorders, working while in school, and countless other factors that make life difficult enough without the added pressure of academics.

If these stressors weren't enough, the fact that adolescents are still developing physically, mentally, socially, and emotionally during this period increases the challenge of daily life exponentially. According to the stages of adolescence as defined by the American Academy of Pediatrics, physical development is complete around age 15 to 17, but mental, social, and emotional development can continue to develop through an individual's mid-twenties. In terms of intellectual development, most boys and girls enter adolescence perceiving the world in concrete terms, incapable of observing the subtleties of certain situations and ideas, and it may

take until early adulthood to apply their knowledge and skills to their daily life with regularity. Depending on the environment in which a person lives, emotional development can also take until adulthood to fully develop. This development is marked by the adolescent displaying less overt affection toward his or her parents, more time spent with friends, and often contentious and rule breaking behavior both inside and outside the home.

Finally, social development is similar to emotional development in that it is marked by the growing and strengthening of relationships with friends and the possibility of romantic attachments to members of the same or opposite sex, as well as learning to define one's identity in numerous social circles. Each of these stages can vary from person to person, and some individuals may be further along in certain areas of development and behind in others. Despite these variations, adolescents are expected to continue to learn and thrive in school, and many are still developing after graduating high school, continuing as they enter college or the workforce. Even in a completely healthy and risk-free environment, it can be difficult for a developing adolescent to manage everything in his or her life.

Schools are a central and highly influential component of children's and adolescents' lives that provide the opportunity for personal, academic, and social growth, despite potential socioeconomic, racial, or cultural differences. These schools can serve as an 'island of hope' for all children, most importantly for those from the environments and experiences that put them at risk (Schorr, 1997). In addition, schools are in a unique position to provide protective influences that may serve to increase resilience in those children who live in more difficult and trying circumstances. The responsibility to protect and engage students falls on those who work with them in the school system, from teachers and tutors to administrators and coaches. School psychologists must lead the charge to strengthen the systems within schools that are pivotal in

providing the protective factors that build resiliency in the children and adolescents who attend these schools.

Resiliency

Resiliency refers to the capacity for an individual to positively adapt to challenges and adversity, and in the context of children, to continue healthy development (Masten, 2008). Resiliency is determined in part by the protective factors that a child may or may not have developed. An integrative review of the research on protective factors conducted by Benzies and Mychasiuk (2009) documented the protective factors an individual may have on an individual, family, and community level. Individually, protective factors include an internal locus of control, emotional regulation, belief systems, self-efficacy, effective coping skills, increased education, health, temperament, and gender. On a family level, protective factors include family structure, intimate partner relationship stability, family cohesion, supportive parent-child interaction, social support, adequate housing, stable income, and a stimulating environment. Finally, on a community level, protective factors include involvement in the community, peer acceptance, supportive mentors, safe neighborhoods, access to quality schools, and access to quality healthcare. While not an exhaustive list, any combination of these protective factors may make a child more resistant to failure when exposed to challenging or adverse situations.

When a child is faced with an adverse circumstance, their ability to remain resilient lies within the interaction between the risk factors present and the individual's protective factors (Zolkoski & Bullock, 2012). Risk factors are statistical correlates of poor or negative outcomes, such as poverty, low maternal education, low socioeconomic status, low birth weight, family instability, among others (Masten, Best, & Garmezy, 1990). It is essential that children have a variety of needs met before they can continue a normal and healthy developmental pathway.

Theoretically, there is significant overlap between the idea of protective factors that are required to allow a child to both develop normally as well as withstand adversity, and that of Bronfenbrenner's ecological model.

The conceptual foundation of resiliency has ties to Urie Bronfenbrenner's (1974) ecological model. In this model, the development of a child takes place in five socially organized subsystems that help and support the growth of a person. The first of these five systems is the microsystem, which entails a pattern of activities, social roles, and interpersonal relations experienced by a child. The next system is the mesosystem, which is essentially a combination of microsystems, such as the school and the home. The exosystem comprises the links between different mesosystems, such as how a child's school links to his or her home and community. The macrosystem is like a culture or subculture, including belief systems, bodies of knowledge, material resources, and life course options that are part of a culture. The final system is the chronosystem, which consists of the overall passage of time during a human life (Bronfenbrenner, 1974). The parallels between the ecological model and the development of resilience are immediately apparent. The development of resilience is a complex process that includes innate factors, family, factors, and community factors that all guide the promotion of protective factors. Each of these areas are both isolated as well as interrelated, and the overall development of protective factors in a child takes place in each of the ecological subsystems. The school plays an important role as both a mesosystem, as well as an important component of the microsystem and exosystem in a child's life. Given these links to a person's overall development, the quality of school that a child attends can have great importance on his or her overall life trajectory, including the development of resilience.

School Climate

School climate has been a topic of growing interest in the United States and across the world over the past three decades. The potential for the use of promoting positive school climate strategies as a means of creating and reinforcing safer, more civil, and more supportive schools has been pushing the research forward in the hope of improving the school experience for both students as well as faculty and educators. The National School Climate Council, or NSCC (2007) defines school climate as being based on "the patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures" (p. 5). A school that values and promotes a positive school climate, according to the NSCC, fosters youth development and learning necessary to a productive and satisfying life in a democratic society.

Given how broad the definition of school climate is, research on the topic has focused on four essential areas when measuring and studying school climate. These areas are safety, relationships, teaching and learning, and institutional environment (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). Safety refers to students feeling emotionally, intellectually, and physically safe. Relationships refers to the how connected students feel to both their peers, their educators, and their school, and is also referred to as 'school connectedness'. Teaching and learning represents how teachers and school leaders strive to define their rules and norms, goals, and values that shape the learning environment. Finally, institutional environment can refer to the physical surroundings of the school, also known as school culture, as well as circling back to relationships and focusing on school connectedness and engagement (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012).

School Connectedness

School connectedness, which is defined as "the belief held by students that adults and peers in the school care about their learning as well as about them as individuals", is an integral part of a positive school climate ("School Connectedness", 2009, p. 3). This feeling of relating to one's school has been linked to reduced drug use, early sexual initiation, alcohol and tobacco use, violence, and gang involvement (Resnick et al., 1997). School connectedness has also been linked to higher academic achievement, attendance rates, and high school completion rates (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson at al., 2000). The interest in promoting school connectedness because of the potential benefits has grown to the extent that the Center for Disease and Prevention (2009) has published a set of recommended strategies for schools to use to increase connectedness.

The theory behind the school climate and school connectedness has roots in Maslow's hierarchy of needs (Maslow, 1954). The needs in Maslow's hierarchy, from the bottom of the hierarchy, are physiology, safety, love/belonging, esteem, and self-actualization. The nature of this theory is that for one to begin to fully develop one need, the prior need must first be satisfied. In the context of the school, a child must be nourished to feel safe, a child must feel safe and secure to begin to feel love and belonging, and a child must feel loved and accepted before developing a sense of self-esteem. The final need of self-actualization is rare for any person to obtain, and is generally excluded from the school context. As schools develop a more positive school climate, the needs of children as defined by Maslow's hierarchy are more likely to be met, theoretically aiding in the healthy development of students.

Building Resiliency Through a Positive School Climate

Many of the traits associated with resiliency can be learned and fostered in the school environment. In their book, *Resilience in Children: Fostering strength, hope and optimism in your child,* Brooks and Goldstein (2001) postulated that the development of emotional, social, and civic competencies, in addition to growing up in a safe, supportive, and engaged school will help build a resilient mindset in children. They suggested that children growing up in these schools develop skills associated with resiliency, such as learning to become more intrinsically motivated, flexible thinking and problem solving, perspective taking, realistic goal setting, and effective communication skills. Included in their book were suggested intervention practices to construct resilience resources across domains, and included the "promotion of organizational changes that reduce the occurrence of adversities or provide support for all children to adapt effectively" (Brooks & Goldstein, 2001, p. 341). Universal intervention programs, such as the Promoting Alternative Thinking Strategies (PATHS), have been found to successfully build social, emotional, and behavioral competence in children exposed to high neighborhood adversity in randomized controlled trials (CPPRG, 1999; Kam, Greenberg, & Walls, 2003). These competencies are especially important because they are linked with several evidence-based protective factors, such as effective problem solving, optimism, impulse control, and empathy (Masten & Reed, 2002).

Regarding school experiences, a review of literature on the subject has suggested that "academic achievement, school climate, and teachers are all potentially important influences on a child's self-esteem" (Hoge, Smit, & Hanson, 1990, p. 118). In a multiple regression analysis completed by Hoge, Smit, and Hanson (1990), the authors found that school climate and evaluations by teachers had significant effects on self-esteem. While self-esteem is not

considered a protective factor in and of itself, it is related to numerous evidence-based protective factors and again highlights the impact that a positive school climate and positive relationships with educators can have on a child's development outside of academics.

School climate has been found to reduce psychopathological symptoms in students as well. A study by Kupernic, Leadbeater, and Blatt (2001) examined the interaction between psychological vulnerabilities and perceptions of school climate and how this interaction affects the emergence of behavioral and emotional problems in middle school students. Using a longitudinal analysis with 230 females and 230 males in sixth and seventh grade, the authors gathered self-report data to examine externalizing and internalizing problems, psychological vulnerabilities, and perceptions of school climate. The results indicated that positive perceptions of school climate moderated the negative effects of self-criticism on both externalizing and internalizing behavioral problems, as well as the effect of a lack of self-efficacy on internalizing problems. A separate study by Kasen, Johnson, and Cohen (1990) examined the differences among schools in emotional and social climate and their relation to changes in behavioral and emotional problems and alcohol use over a two-year period. They found that school conflict and social facilitation were related to increases in childhood psychopathology, and suggested that interventions to alter the school climate may promote emotional and behavioral wellbeing in students.

Interventions designed to boost resiliency exist that focus on core principles of a positive school climate. The Responsive Advocacy for Life and Learning in Youth, or RALLY, is one such intervention. This intervention uses a three-tiered prevention model in which the practitioners integrate a mental health and educational focus to foster students' academic, social, and emotional success (Noam & Hermann, 2002). These practitioners help create relationships

with youth, teachers, and families in high-risk environments to help foster resilient traits in students who are most likely to experience risk factors outside of school. Students growing up in these environments have a greater probability of encountering adversity and developing substantial problems that impact their developmental trajectories (Luthar & Cicchetti, 2000).

The improvement of school climate provides the opportunity for a broad effort that recognizes and supports the efforts towards effective risk prevention, mental and physical wellbeing, and the promotion of positive relationships and social skills (Cohen, 2013). It is apparent based on previous research that measuring and focusing on the promotion of a positive school climate that supports the child, the educator, and the community can promote the development of the student both inside and outside of the school. The opportunity to foster resilience in these children, especially those in high-risk areas, may ultimately improve their developmental trajectories and provide the difference between a healthy adulthood and a maladjusted adulthood. An article by Jonathan Cohen (2013) highlighted the need for a focus on the measurement and improvement of the school climate as "a practical, prosocial strategy that supports all children and their ability to become healthy, lifelong learners" (p. 421).

Current Study

The purpose of the present study is to synthesize the research on both school climate and resilience, and to provide evidence that the two are correlated. While past research has found that social, emotional, and civic competencies can be learned in the school, and that positive relationships with educators can help increase student self-esteem and improve learning, there is a lack of data to show the link between a positive school climate, and the development of protective factors. This study seeks to connect past research into an overarching and simple theme that students develop innate protective factors at an improved rate in schools with a

positive school climate, and that students that feel connected to their schools develop these traits faster than students who do not. Additionally, this study is aimed to provide evidence to support the notion that has been postulated throughout many articles about school climate and resilience.

Research Questions

The research questions for this study are:

1) Do students who perceive a positive school climate display higher traits associated with resilience than students who do not perceive a positive school climate? It is predicted that students who perceive their schools as having a more positive school climate will display higher traits associated with resilience, as measured by the Resilience Youth Development Module (RYDM) of the California Healthy Kids Survey (CHKS), when compared to students who view their school climate as less positive. This result is hypothesized based on previous research indicating that schools can strengthen traits linked to resilience such as social competence, promoting positive relationships between students and faculty, communicating high expectations in academic and social performance, as well as maximizing opportunities for meaningful participation in the school environment (Brooks, 2006). The current study is intended to provide empirical data illustrating that schools with positive climates are linked to these traits in children in a positive manner.

2) Do students who feel connected and engaged with their peers and their educators display more developed traits associated with resilience than those who do not feel connected and engaged? It is predicted that students who feel more connected and engaged with their schools will display higher levels of traits associated with resilience as measured by the RYDM when compared to students who do not feel as connected and engaged with their schools. This result is hypothesized based on previous research indicating that being connected with one's

school has been linked to reduced drug use, early sexual initiation, alcohol and tobacco use, violence, and gang involvement, as well as linked to higher academic achievement, attendance rates, and high school completion rates (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson at al., 2000; Resnick et al., 1997).) The current study is intended to provide empirical data supporting the relationship between school connectedness and traits linked to resiliency.

Summary

This chapter has outlined the concepts of resiliency, school climate, and school connectedness. It has also provided a brief overview that explored the theoretical underpinnings for these concepts and how they may relate to one another. The ways in which school climate and resiliency may interact to provided children with more opportunity to succeed in the face of risk factors is an important avenue to explore, and the following chapter will provide a detailed background into the current literature base on the topics of school climate, school connectedness, and resiliency, as well as provide a more extensive overview of the theory and research behind each of these concepts.

Chapter II: Literature Review

In this literature review, the topic of resilience will be introduced and outlined. Early research on resilience will be discussed, as well as the impact and implications that these studies had on the current state of resilience research within the scientific community. Throughout the study of resilience, numerous protective factors that help people withstand adversity have been defined and explored, as well as risk factors that endanger people and cause maladjustments to become more likely. Following the historical background of resilience, the topic of school climate will be introduced and outlined. School climate has been a relatively new focus of research in which the quality and character of school life are examined to determine how these factors impact student success and wellbeing. The connection between the areas of school climate and those of Maslow's hierarchy of needs will then be explored to outline the commonalities between the theories in terms of the necessity to meet certain underlying needs before allowing a person to develop fully. How multi-tiered systems and supports, such as Response to Intervention and School-Wide Positive Behavioral Interventions and Supports, are related to the building of a positive school climate will be discussed, as well as the idea of school connectedness. Finally, the connection between the tools used to create a positive school climate, and the strategies used to develop resilience in children in the classroom and school will be explored. The need for a better understanding of the importance of school climate in the development of resilience in children will be outlined at the end of this chapter.

Resilience

Resilience has been defined numerous ways, but in the context of research, it has generally been defined as the ability for a person to demonstrate competence despite significant challenges to adaptation (Masten & Coatsworth, 1998). Resilience describes one's capacity to

bounce back in the face of challenge and adversity, and still have successful outcomes. The ability to overcome stressful situations and maintain positive spirit and competent functioning has been the subject of much study for the past several decades. Some of the earliest research on resilience was conducted by Emmy Werner in a study published in 1971 (Werner, 1971). Her study, which took place on the Hawaiian island of Kauai, focused on the children of a poor community that grew up in detrimental situations. Many of these children had alcoholic and mentally ill parents who often did not hold gainful employment. Of the children followed throughout the study, two thirds exhibited destructive behaviors in their teen years, such as substance abuse and teenage pregnancy. The other third of the children, a group that demonstrated traits that allowed them to be more successful than their non-resilient peers, became the focus for Werner. She found that these children demonstrated common traits, which she defined as protective factors. These traits included a mild temperament, higher scores on tests of practical problem-solving skills, an internal locus of control, a close bond with a competent adult, a structured household, and a favorable relationship with a teacher as a role model.

Based on Werner's work, early research on resilience focused on protective factors that explained how certain people could adapt and succeed despite adverse conditions such as abuse, poverty, or trauma. Certain areas of research continue to focus on protective factors as intrinsic traits, while other research explores these protective factors as processes. An article titled *Psychosocial Resilience and Protective Mechanisms* by Michael Rutter (1987), in which he stressed the dynamic quality of resilience, marked a shift in the field of resilience research. Prior research had focused on vulnerability and risk variables, but Rutter highlighted the importance of protective factors, which he calls "highly robust predictors of resilience" (Rutter, 1987, p.317).

He continued to state that these protective factors are "important in showing that they are likely to play a key role in the processes involved in people's response to risk circumstances. But they are of very limited value as a means of finding new approaches to prevention. Instead of searching for broadly based protective factors we need to focus on protective mechanisms and processes. That is, we need to ask why and how some individuals manage to maintain high self-esteem and self-efficacy despite facing the same adversities that lead other people to give up and lose hope…The search is not for broadly defined protective factors, but rather, for the developmental and situational mechanisms involved in protective processes" (Rutter, 1987, p. 317). Whereas a protective factor is a trait that a person may or may not have, a protective process is an indirect and dependent reaction between a risk factor, a protective factor, and either an adaptive or maladaptive outcome. Rutter reiterated that "the essence of the concept is that the vulnerability or protective effect is evident only in combination with the risk variable" (Rutter, 1987, p. 371). He used the example of adoption, which "probably carries with it an increased psychiatric risk for children from advantageous backgrounds, but it may be protective for those born to deviant parents living in discord or deprivation… It is the process or mechanism, not the variable, that determines the function…. The search is not for factors that make us feel good but for processes that protect us against risk mechanisms" (p. 317-318). Rutter didn't recommend that research on protective factors be abandoned, but rather that research also examine the processes or mechanisms through which protective factors and risk factors interact within an individual to lead to either an adaptive or maladaptive outcome.

Resilience is inhibited by risk factors and promoted by protective factors (Zolkoski & Bullock, 2012). Protective factors can alter a person's response to adverse situations so that potential negative outcomes might be reduced or even avoided. Resilience is optimized when

protective factors are strengthened at all levels of the socio-ecological model, which consists of the individual, the family, and the community (Benzies & Mychasiuk, 2009). These protective factors consist of individual characteristics, family conditions, and community supports that combine and interact to develop resiliency within a child.

Individual Characteristics

The capacity for successful developmental outcomes despite adversity or threatening circumstances and challenges has been the focus for many of the researchers exploring childhood resiliency (Masten, Best, & Garmezy, 1990). The components that can determine whether a person is capable of thriving despite adverse conditions has been the focal point of this research. Protective factors that can be found within a child include average or higher intelligence, social competence, emotion regulation, an internal locus of control, and a sense of self-worth (Masten el al., 1990; Rutter, 1987). In a study by Masten (1990) it was found that children who experience chronic adversity fare better and recover more successfully when they are effective problem solvers, fast learners, easily engage with other people, and perceive themselves as valued by society. Another study by Ford (1994) found that African American children growing up in poor environments could demonstrate social and academic competence despite barriers of peer pressure, discrimination, and negative relationships with their educators when they possessed the protective factors described above. These studies highlight the importance of the protective factors that are innate and often difficult to change in home, community, or the school system. Other individual characteristics that have been linked to resilience include temperamental characteristics that provoke positive responses from family members and strangers, a close bond with a caregiver during the first year of life, sociability combined with a sense of independence, and optimistic view of life experiences (Zolkoski & Bullock, 2012).

Self-Concept is another protective factor, which includes positive self-esteem, as well as experience with hardship that heightens one's confidence in their ability to cope (Werner, 1984).

Family Conditions

Protective factors that can be found within a child's family include close nurturing relationships with parents, caregivers, and siblings, respectful communication between family members both inside and outside of the home, emotional support from family members, the marital status and satisfaction of the child's parents, parental expectations of the child, as well as setting and teaching of core values (McCubbin & McCubbin, 1996). Other family conditions that have been linked to the development of resiliency include being raised by authoritarian parents, positive maternal expression during infancy, a structured and cohesive family, supportive parent-child interactions, a stimulating environment, social support, and a stable and adequate income, are linked to resiliency as protective factors (Benzies & Mychasiuk, 2009). A study by Greef and Nolting (2013) examined the strengths and resources associated with the adaptation of families from previously disadvantaged backgrounds in South Africa following the diagnosis of a child with a developmental disability. The authors sought to understand what the keys were to positive adaptation and coping strategies when faced with the challenge of raising a child with a developmental disability. They found that the quality of family communication was the most significant predictor of family adaptation, using the Family Problem Solving and Communication Scale (FPSC), which evaluates positive and negative patterns of family communication that influence problem solving and coping. Additionally, the family's attitude towards new experiences and challenges, acceptance of the situation, and commitment towards the family as a unit were all positively related to family adaptation. While this study focused on the resilience of the family unit, rather than on the influence of the family on the child, the

positive adaptation focuses on the child. The way a family responds towards challenges in which the child is directly facing reinforces the cohesive family unit and supportive environment linked to the development of resilience within a child.

Community Supports

Within the community, there are numerous protective factors that can influence the development of a child. These factors include opportunities for prosocial involvement, recognition for prosocial involvement, and high neighborhood attachment. Having access to adults with which a child can discuss important subjects, being recognized when a child is displaying positive social behaviors, and having a general positive view of one's community have been shown to decrease instances of behavior problems in children and adolescents, per a recent study (Kim, Gloppen, Rhew, Oesterle, & Hawkins, 2014). The study also highlighted that these same factors are important within a school context, as well as within the community. Not only are these factors critical in the development of resiliency in a child, they are also essential for children's healthy development as they grow and begin to venture out into the world, specifically within their community and their school. Additional community support factors linked to the development of resilience include positive role models within the community, early prevention and intervention programs, safety in neighborhoods, relevant support services, recreational facilities, accessibility to health services, economic opportunities for families, as well as spiritual organizations, have been linked to resiliency (Benzies & Mychasiuk, 2009).

Much of the research on resilience today explores the interaction between individuals and their environments, and how these interactions may protect against the potential harm stemming from certain risk factors (Zautra, Hall, & Murray, 2010). As described above, these processes that help people cope and adapt to stressful circumstances can range from individual coping

strategies, family and community relationships, as well as school and social circumstances that make resilience more likely to occur (Leadbetter, Dodgen, & Solarz, 2005). Most family, community, and within-child factors may be out of the control of educators and the school system. It is the factors that can be cultivated within the school building that are the responsibility of teachers, administrators, and school psychologists.

Building Resilience within the School

While there are certain components of resilience that cannot be taught, or learned, elements such as social, emotional, and civic skills, as well as knowledge and dispositions, can be learned and developed within the school (Cohen, 2006; Zins et al., 2004). Protective factors such as optimism, effective problem solving, impulse control, and empathy, each of which contribute to resilience, overlap with social, emotional, and civic abilities and dispositions. Evidence has shown that these skills and traits can not only be taught in schools, but are associated with a positive school climate (Masten & Reed, 2002; Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012).

Recently, the American Psychological Association (APA) published a summary of factors that support the development of resiliency ("The road to resilience." 2010). These include factors such as being able to make connections with people, avoid seeing crises as insurmountable problems, accept that change is a part of living, and move toward one's goals. Additional factors include being able to take decisive actions, look for opportunities for self-discovery, nurture a positive view of yourself, keep things in perspective, maintain a helpful outlook, and take care of yourself. These factors, per APA, help children and adolescents develop into resilient adults who are better able to handle adversity and bounce back from difficulty. Given the amount of time children spend in school and in the classroom, the school

environment becomes an influential part of a child's life. The impact that a school can have on a child is significant, and it is important to recognize the opportunities available to create a place that can influence the development of resiliency within children through teaching and nurturing the factors described above. Additionally, cultivating a school climate that positively influences children becomes a crucial component towards the development of resiliency.

School Climate

School climate is defined by the National School Climate Center as the quality and character of school life as it relates to norms and values, interpersonal relations and social interactions, and organizational processes and structures (Cohen, 2006). School climate has been studied by educators for over one hundred years. One of the first acknowledgements of the importance of school climate was in the book *The Management of a City School* by Perry (1908), in which he explicitly writes about how school climate affects students' ability to learn. Early empirical research on school climate began in the 1950's when Halpin and Croft (1963) began systematically studying the impact school climate had on student learning and development. Certain researchers focused on observable characteristics that grew out of organizational research and school effectiveness (Anderson, 1982), while other researchers focused on both observable and non-observable dimensions. These dimensions included measuring the size of the school, noise levels in hallways and cafeterias, physical comforts relating to heating, cooling, and lighting, as well as surveying how safe individuals feel, how often they interact with their educators, and the quality of those interactions (Freiberg, 1998). In his book, Jerome Freiberg (1998) discussed how something as simple as noise levels can affect the comfort and stress levels of students in a school. Using enter and exit videos with students, videotaping classrooms and hallways, and interviewing administration and teachers, he found that students respond more

positively to learning environments when they are included and given an opportunity to participate in shaping their own education, and that environment itself, and something as simple as a noisy cafeteria can dramatically impact the stress levels of both the students as well as the staff. He emphasized that these factors taken individually may not seem like major issues, but in the larger context they can become important in shaping the overall climate of a school.

As the knowledge base on school climate accumulated, researchers began to agree that there are four essential areas of focus when measuring school climate: safety, teaching and learning, interpersonal relationships, and institutional environment (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). Research on school climate has only increased over time, and in the past three decades, this body of research has grown to attest to the importance of school climate and how it can impact learning and positive youth development (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). Today, an article by Center for Disease Control and Prevention titled *School Connectedness: Strategies for Increasing Protective Factors Among Youth* (2009) recommends school climate reform as a data driven prevention strategy that promotes healthy relationships as well as a reduction in drop-out rates.

School Climate Dimensions

The four dimensions of school climate mentioned previously have each had significant empirical findings over the years, highlighting the importance of each dimension within the framework of a positive school climate. These dimensions: safety, teaching and learning, interpersonal relationships, and institutional environment, are major factors in a positive school climate, and research has found that the presence of each provides substantial benefits within a school.

Safety

This dimension of school climate comprises of the rules and norms, sense of physical security, and sense of social-emotional security one feels within the school. Important to this dimension are that rules are clearly communicated throughout the school regarding physical violence and teasing, and that there are clear and consistent norms for adult intervention. Students must feel safe from physical harm within the school, as well as feel safe from verbal abuse, teasing, and exclusion (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). Research has found that children in larger schools are less likely to feel safe and more likely to be victims of verbal bullying (Lleras, 2008). In schools where threat assessment guidelines are followed, students have reported fewer instances of bullying, felt more comfortable seeking help, and possessed more positive perceptions of their schools (Cornell, Sheras, Gregory, & Fan, 2009). While research has suggested that positive school climate is associated with reduced aggression and violence, bullying behavior, and sexual harassment, other research has shown that the association between levels of aggression and victimization is dependent on each student's feeling of connectedness to the school (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012; Wilson, 2004). Additionally, a study by Gottfredson et al. (2005) examined the relationship between school climate and school disorder. After controlling for the effects of community characteristics and school student composition, they found that schools in which students perceived greater fairness and clarity of rules had less delinquent behavior and less student victimization.

Teaching and Learning

This dimension of school climate revolves around support for learning, as well social and civic learning. This can be increased with the use of supportive teaching practices, such as encouragement and constructive feedback, support for risk-taking and independent thinking, and

creating a welcoming atmosphere that encourages dialogue and questioning. The building of social and civic knowledge includes teaching the practices of effective listening, conflict resolution, self-reflection, emotional regulation, empathy, ethics, and responsibility (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). Research has shown that in classrooms demonstrating respect, shared expectations, and encouragement of participation in academic learning, students are more engaged and have higher achievement (Ennis, 1998; Ladd, Birch, & Buhs, 1999; Voelkl, 1995). In a study by Voekl (1995), the perception of school warmth, which was defined as the degree of teacher warmth, caring, and supportiveness as perceived by the student, was found to be significantly related to academic achievement and participation. However, this relationship was found to be nonexistent once the effect of participation was eliminated. The findings of this study indicate that students' participation may play an important part in the relationship between students' perceptions and achievements. A school climate in which the teachers make the students feel welcomed and encourage participation is a crucial component for a school focused on nurturing student development and promoting academic success. A separate study by Ladd, Birch, and Buhs (1999) found that stressful aspects of kindergarteners' peer and teacher relationships in the school environment adversely impacted their classroom participation and achievement. Additionally, they found that as children enter the school, their initial behavioral orientations influence the types of relationships they form with both peers and teachers, creating a potential negative behavior-relationships-achievement dynamic if not appropriately handled. Given that classroom participation is an important prerequisite for appropriate development in early childhood as well as academic success, the ways in which teachers interact with their students can have a substantial impact on how that child develops, especially at such an early age.

Interpersonal Relationships

The Interpersonal Relationships dimension of school climate focuses on a respect for diversity, as well as social support for both students and adults within the school. Mutual respect for individual differences in gender, race, and culture at all levels of the school in student-student, adult-student, and adult-adult relationships within the school is imperative. Additionally, a pattern of supportive and caring relationships between educators and students that includes high expectations, a willingness to listen, and personal concern for their wellbeing promotes a positive school climate. Supportive peer relationships between students must also be encouraged, as students often rely on their peers for assistance with academic problems, social difficulties, and stressful situations as often as they look to adults for assistance (Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012). A study by Lubbers and colleagues (2006) in the United Kingdom found that students who were accepted by their peers had lower probabilities to be retained in a grade or move downward in the track system. Interestingly, peer acceptance and relatedness were more strongly correlated in classes with more negative class climates, indicating that students rely more on one another in difficult academic environments. Another study by Wentzel and Caldwell (1997) examined two samples of sixth grade students over time to explore the relationship between number of friendships, peer acceptance, and group membership to academic achievement. Their longitudinal analysis found that peer relationships are related to classroom achievement indirectly, moderated by prosocial behaviors. Students who displayed more prosocial behaviors were both more likely to have friendships, peer acceptance, and group membership, as well as display higher levels of academic achievement. These studies highlight the importance that the development of positive relationships between students as well as between students and teachers. These relationships impact multiple levels of

development and academic success. A school climate which fosters more positive relationships will indirectly positively influence many other factors in the process that contribute to academic achievement as well as personal well-being.

Institutional Environment

Finally, the Institutional Environment dimension of school climate involves school connectedness, engagement, and the physical surroundings of the school. School connectedness, which will be discussed in further detail shortly, is correlated with many positive health and academic adolescent outcomes. Positive identification with the school including opportunities for broad participation in school life for students, staff, and families encourages a positive school climate. Research has shown that the perception of school climate can significantly influence student engagement. A study by Bandyopadhyay, Cornell, Fan, and Gregory (2012), using a sample of 7,058 randomly selected ninth graders from 289 schools participated in the Virginia High School Safety Study, found that the individual differences in perception of school climate characterized by bullying climate were associated with lower commitment to school, as well as less involvement in school activities when controlling for the effects of gender, race, school size, and proportion of minority students at the school. This factor combines with the safety dimension and highlights the importance of the perception of a student's school and how it can impact the willingness to participate in school activities and feel a sense of commitment and ownership with one's school. This interrelated dynamic, where perception is related to engagement, which is then related to climate, is an important component in maintaining a positive school climate given the influence it can have a student's wellbeing.

The size and available resources a school has plays a large part in how the institutional environment is perceived. A study by Lleras (2008) used data from a national sample of 10,061

racially diverse 10th graders from 659 high schools to examine the impact that some characteristics of a school environment can have on students in these schools. The results showed that students are more likely to experience disruptive classrooms in large and high-poverty schools and that students feel less safe in large and public high schools. Additionally, high-achieving African American students and Hispanic students were at higher risk of verbal harassment within predominately minority schools. Research on the benefits of small school size has shown that smaller schools are more positively correlated with school connectedness, better academic performance, lower rates of bullying, and a more positive learning environment (McNeely, Nonnemaker, & Bloom, 2002; Stevenson, 2006; Cotton, 2001; Klein & Cornell, 2010). While more within the realm of school culture, cleanliness, order, and the appeal of the school facilities, as well as adequate resources may also promote a positive school climate. A review of the research on school facility attributes and their effect on academic outcomes revealed that school facilities do in fact affect learning (Schneider, 2002). This review highlighted factors such as special configurations, noise, heat, cold, light, and air quality had significant effects on both students' ability to perform as well as teachers' ability to teach. A study by Uline and Tschannen-Moran (2008) surveyed teachers from 80 Virginia middle schools on their perceptions of their school's climate, as well as measured the quality of the school's facilities on a seven-item scale. Student socio-economic status and achievement information was also gathered for the purposes of the study. The results confirmed a link between the quality of school facilities and student achievement in English and mathematics. The quality of the facilities was directly related to the perceptions of the school's climate. In fact, the results of the study indicated that school climate plays a mediating role in the relationship between facility quality and student achievement. These findings highlight the importance of the quality of school

facilities and resources, as well as the dynamic relationship between perceptions of a school's climate and academic achievement. Other research has found that environmental variables, such as the layout of a classroom, student-teacher interactions, and even class schedules, can influence students' behaviors and feelings of safety within a school (Conroy & Fox, 1994; Van Acker, Grant, & Henry, 1996). A study by Van Acker, Grant, and Henry (1996) investigated the reciprocal relationship between student and teacher behavior by level of risk for aggression. Directly observing 206 students, the researchers found that students at higher risk of aggression were treated significantly differently than students at lower risk of aggression, highlighting the dynamic in which student behavior influences teacher behavior which in turn affects student behavior. The results reinforce the notion that school-based programs designed to prevent the development of antisocial behavior in children for those at risk of aggression, and how student-teacher interactions can dramatically impact the development of a child in the classroom.

School Connectedness

Related to school climate, school connectedness is "the belief held by students that adults and peers in the school care about their learning as well as about them as individuals" ("School Connectedness", 2009, p. 3). This avenue of research spans many fields, such as education, physiology, and sociology, leading to a diverse empirical base. There is a large amount of evidence highlighting the importance of a student feeling connected to his or her school. A study by Resnick et al. (1997) used the National Longitudinal Study on Adolescent Health to identify risk and protective factors at the family, school, and individual levels as they relate to adolescent health. More specifically, they wanted to examine how these factors related to emotional health, violence, substance use, and sexuality. Using a cross-sectional analysis of interview data from a total of 12,118 adolescents in grades seven through twelve from eighty different high schools,

they determined that young people who feel connected to their schools are less likely to engage in risky behaviors such as drug use, early sexual initiation, alcohol and tobacco use, violence, and gang involvement. Parent-family connectedness, as well as school connectedness, were found to be protective against each of the health risks the authors measured. Additionally, higher academic achievement, including grades and test scores, as well as overall academic attendance and completion rates have been positively associated with school connectedness (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson et al., 2000).

The Center for Disease Control and Prevention (2009) has published recommended strategies for schools to increase connectedness to school. One component of these strategies includes creating decision-making processes that facilitate student, family and community engagement, academic achievement and staff empowerment. Another component focuses on providing opportunities for families to be actively involved in their children's academic and school life. Additional components include providing students with the academic, emotional and social skills necessary to be actively engaged in school, as well as the use of effective classroom management and teaching methods to foster a positive learning environment are also highlighted in their recommendations for schools. Finally, the Center for Disease Control and Prevention recommends providing professional development and support for teachers and other school staff to enable them to meet the diverse cognitive, emotional and social needs of children and adolescents, as well as creating trusting and caring relationships that promote open communication among administrators, teachers, staff, students, families and communities. The use of these strategies has been shown to increase students' feelings of connectedness with their schools and their educators, and has been linked to the positive outcomes described above ("School Connectedness", 2009)

School Climate and Maslow's Hierarchy of Needs

The nature of these four areas of focus in school climate research stems from Maslow's hierarchy of needs (Maslow, 1954). Maslow's hierarchy of needs is a theory proposed by Abraham Maslow, and is generally portrayed as a pyramid with the largest, most fundamental needs at the bottom, and the need for self-actualization at the top. These needs, from largest to smallest, are physiological, safety, love/belonging, esteem, and self-actualization. Regarding resilience, the needs of safety, love/belonging, and esteem are most relevant. Before a student can learn and grow in a school environment, he or she needs to feel safe. A school must be secure, and rules must be properly enforced. Potential hazards to this need include bullying, weapons in schools, property damage, as well as the numerous hazards that may take place around the school, especially in areas of high poverty. Deficiencies in this level of Maslow's hierarchy may stem from neglect, abuse, shunning, ostracism, and bullying. When this need is not met, a child may have difficulty establishing significant relationships with friends, family, and educators. Finally, Maslow's need of esteem includes self-esteem and self-respect. Developing esteem gives students a sense of contribution and value, as well as positive relationships with their peers and educators. The belief that one can be successful in academics is important for that success to take place. Students with low self-esteem may develop depression and lack the motivation to succeed in school. This low self-esteem often stems from prior Maslow needs not being met. It is important that schools attempt to meet these needs and foster a sense of self-esteem in students.

There is a significant amount of research to support the notion that children need their basic needs met before they can fully develop their next need. For the most basic need of physiology, a study by Murphy et al. (1998) examined the relationship between food

insufficiency, defined as parent-reported food insufficiency due to constrained resources, and low-income children's psychosocial functioning. Using parent, child, and teacher interviews with ninety-six children in four inner city public schools, the authors found that hungry and at risk for hunger children were twice as likely to be classified as having impaired functioning by parent and child report. Additionally, their teachers reported higher levels of hyperactivity, absenteeism, and tardiness with these children.

The need for safety in schools is also well-researched. A study by Cornell, Sheras, Gregory, and Fan (2009) examined and compared ninety-five Virginia high schools by surveying students in schools which used threat assessment guidelines as well as schools that were not using threat assessment guidelines. The guidelines consisted of a seven-step decision tree in which a school administrator investigates any reported threat and determines whether the threat can be resolved readily or is more serious in nature. Any threat could not be easily resolved is classified as a substantive threat, and a team is used to respond appropriately to the threat and take proactive protective action on behalf of the student. The results of the study showed that in the schools in which the safety guidelines were used, students reported less bullying, greater willingness to seek help, and more positive perceptions of the school's climate.

Children must feel connected to their peers and teachers in schools in order satisfy the need of love and belonging, and to develop effectively. Resnick et al. (1997) used the National Longitudinal Study on Adolescent Health to examine the relationship between adolescent health risk behaviors and school connectedness and family connectedness. They found that students who felt connected to their school were less likely to engage in risky behaviors such as drug use, early sexual behavior, alcohol and tobacco use, and violence and gang activity. Additionally, an examination of longitudinal data sets by Klem and Connell (2004) found that higher academic

achievement as well as attendance and completion rates were positive associated with school connectedness.

Without these needs being met, students are unable to focus on academics, develop positive relationships with their peers and educators, and grow into competent, functional, and happy adults. This highlights the importance of research on school climate as a vital means of both prevention of negative life outcomes, as well as increasing positive outcomes in students.

Importance of a Positive School Climate

A school's climate sets the tone for all learning and teaching within a school, and can be predictive of student outcomes as they learn and develop (Cohen, McCabe, Michelli, & Pickeral, 2009). Numerous studies have been undertaken recently to support the importance of a positive school climate in promoting academic achievement, school safety, dropout prevention, teacher retention, healthy social interaction, and wellbeing. Smith, Connolly, and Prysesky (2014), through the Baltimore Education Research Consortium, explored practices undertaken in five schools and determined overarching themes that these schools had in common in their efforts to successfully promote a positive school climate. These schools were selected based on perceived positive changes in climate and reduced suspension rates, based on the guidance of staff in the Baltimore City Schools Office of Student Support. The authors sought to determine what factors most influenced a school's climate from the perspective of both the students and staff, what strategies or practices schools could adopt to promote a positive school climate. The role of the principal as a leader, the systematic and individual practices that supported interpersonal engagement, the importance of relationships, high expectations, consistency and fairness, communicative competence, and the effective use of resources were the primary common themes the authors discovered during their explorations of these schools.

While the previous study highlighted the importance of the principal as an initiator of positive change in school climate, school psychologists are another role that can help create meaningful change in schools. School psychologists can promote a positive school climate by supporting teachers' problem solving and team collaboration, helping teachers and parents implement strategies to support students' self-regulatory skills, consulting on positive discipline and behavior, identifying cultural and logistical barriers to family engagement, and by selecting appropriate survey instruments to assess school climate issues and effectively evaluating and drawing conclusions from the data (Doll, 2010). The effort to improve school climate is imperative given the potential to promote positive wellbeing in children and adolescents, as well as the potential as a prevention tool that can instill resiliency in those who may face adversity.

It is important for schools to recognize the importance of students' social and emotional wellbeing in addition to the importance of academic success. Recently, states which have been granted federal support that enabled them to implement school climate surveys and programs in high-poverty school districts, presented their data at the US Department of Education Safe and Supportive Schools 2013 conference. While their data is not readily available, their presentations highlighted the improvements in both academic achievement as well as student behaviors since implementing these programs three years' prior ("What can schools do," 2013). Additionally, schools have the potential to foster resilience in children and adolescents by engendering and nurturing protective factors, especially when a school's climate and structure promote equity, resilience, and social justice (Oades-Sese, Kitzie, & Rubic, 2013). Schools must be able to build trusting relationships with students and develop a culturally relevant core curriculum that reflects children's experience with respect to their individual values and language. Schools are in a unique position to promote positive social connections between staff

and students, among students, and between the school, the community, and the child's home. Educators can teach and nurture positive qualities such as empathy, optimism, and forgiveness, as well as set high expectations for students by teaching realistic and achievable, yet challenging goals ("What can schools do," 2013).

Each school will have unique challenges to overcome to reach the level necessary for instilling resilience in its students, depending on many factors, including the socioeconomic status of the district, whether the district is rural, suburban, or urban, as well as the cultural and ethnic diversity of the school and community population. An article by Oades-Sese, Kitzie, and Rubic (2013) describes the benefits and drawbacks of urban, rural, and suburban schools in terms of risk-factors and protective factors. Urban schools, per the authors, benefit from the cosmopolitan setting by giving the children the opportunity to build multicultural relationships and perspective, develop problem-solving and diversity-influenced social skills, and learn to have a healthy respect and tolerance for those different than them. However, these schools are also generally filled with teachers from outside of the community, who are often of different ethnicity and socioeconomic status of the students, which makes it more challenging to connect and engage with students. Crime rates are generally higher in and around urban schools, and poverty is much more prevalent, which creates additional difficulties for children and faculty, as well as increasing the need for protective factors to be developed. Rural schools are often the social and cultural center of the community, have smaller and have better student-teacher ratios, and benefit from the close nature of small communities by having strong ties with the families who send their students to these schools (Dewees, 1999). The smaller student-teacher ratios allow for more individualized curriculum according to the student's needs, increased monitoring of the students learning, and higher student achievement (Greenwald, Hedges, & Laine, 1996).

Challenges that rural schools often face are a lack of diversity, which can lead to oppression and racism towards immigrant and minority families, as well as poverty. Finally, the authors describe suburban schools often benefit from having more financial capital and stability compared to rural and urban schools that lead to better facilities, a low student-faculty ratio, and better educated parents. Challenges that these schools face are trends towards segregation between school districts, and increasing gaps between high achieving and low achieving schools (Oades-Sese, Kitzie, & Rubic 2013).

Progress in Improving School Climate

Given the variability in challenges and strengths of schools depending on their location, their cultural make-up, the community in which they are located, and the financial stability they have, it is increasingly important to have competent and knowledgeable school psychologists to be aware of the strengths and weaknesses of the school, and to have the training and capacity to provide effective consultation services. For many schools, the transformation to an ideal academic environment can be a challenging task. As the following section will demonstrate, the recent move towards the Response to Intervention (RtI) framework has been a big step towards establishing a climate in the school system that benefits both the students and the faculty in positive ways.

Response to Intervention

The Response to Intervention framework grew from efforts to improve the process through which children who require special education practices are identified. RtI is defined as "the practice of providing high-quality instruction and interventions matched to student need, monitoring progress frequently to make decisions about changes in instruction or goals, and applying child response data to important educational decisions" (Batsche et al., 2005, p. 5).

This method of academic intervention was designed to provide early, systematic assistance to children having difficulty in school. The RtI framework is a multi-tiered approach, utilizing three tiers to encompass all students in each school. Tier one is the universal tier, in which eighty to ninety percent of students in all settings are monitored as a preventative and proactive measure, ensuring that they continue to meet the appropriate academic standards. This tier consists primarily of universal screening to ensure students are meeting standards, and provide research-based interventions on a large scale. Progress is continuously monitored in tier one, and if certain students cannot keep up and continue to struggle, they are moved into tier two. Tier two, or the targeted intervention group, is the secondary interventions tier and typically contains about 15% of the student population. This secondary layer of intervention consists of short-term research-based intervention on top of core curriculum instruction. This supplementary instruction is generally problem-focused in which individual or small group focused plans are implemented with the goal of improving the outcomes of the students and reintegrating them into tier one at the appropriate time. If the students do not respond well to the interventions administered, they are moved into the third tier. Tier three is the tertiary tier that is characterized by longer term, individualized focus on the roughly five percent of students who do not respond well to the tier one and two approaches. This tier is sometimes the same as the special education program in the school, and is designed to prevent long term academic and social failure (Fuchs & Fuchs, 2006). Students in this tier are administered diagnostic assessments to determine their strengths and weaknesses in performance, and a multidisciplinary team may be formed to determine if and what kind of specialized instruction the student may need.

An integral component of the Response to Intervention framework is the problem-solving method that focuses on the individual student and his or her individual needs. Batsche et al.

(2005) describe the importance of having a decision-making system that will help design instructional strategies that have a high probability of success, as well as provide frequent opportunities to monitor the effectiveness of the instruction. They define the key steps of this process as: a) defining the problem, b) analyzing the cause of the problem, c) developing and implementing a problem-focused intervention plan, and d) evaluating the effectiveness of the intervention plan and adjusting if necessary. The success of this final step depends on whether or not an effective data collection system is integrated within the school and the RtI framework. In order to make effective decisions during the intervention design and evaluation stages, school faculty should strive to gather the appropriate data to make these decisions; data that focuses on the core curriculum goals, and data that allow educators to determine where the students' needs truly lie.

According to the Sawyer, Holland, and Detgen (2008), researchers from the Academy for Educational Development, there are four primary reasons for implementing Response to Intervention within school systems. The reasons are to increase achievement for all students, to reduce the racial and ethnic disproportionate representation of minority students within special education services, to increase the collaboration between general and special education, and to help identify students with learning disabilities by a different means other than the IQ-discrepancy model. RtI can also increase efficiency in schools by reducing the amount of unnecessary referrals, which can take up valuable time and resources that the school could otherwise use to help students in need (Farstrup, 2007). This framework provides the best opportunity for students to succeed at high levels by providing them with the time and support necessary to learn and grow at their own pace, and the results benefit students, teachers, administration, and families alike (Buffum, Mattos, & Weber, 2010).

The effectiveness of RtI is dependent on the ability of the problem-solving team to effectively progress monitor students on all tiers, and gather the appropriate data to make the most effective decisions. Response to intervention provides a prevention and problem focused system to ideally reach and benefit all students in a school. In a study surveying 557 school-based school psychology practitioners, Sullivan and Long (2010) found that while nearly half of respondents who worked in schools which implemented RtI reported a greater proportion of their time spent in academic interventions, and conducted fewer psychoeducational assessments, than respondents who worked in non-RtI school systems. However, students in schools which implement RtI with fidelity are more likely to be in appropriate educational placements, and as a result, are less likely to experience difficulties in the classroom as a result of a misfit between student and curriculum. There is evidence to suggest that the delivery of RtI-based student support will result in socially significant outcomes, as long as the student's overall social and academic functioning improves within the system as well (Hawken, Vincent, & Schumann, 2008). The use of effective behavioral supports in addition to the academic supports that RtI provides can increase the potential benefit of this system exponentially, especially when it utilizes a positive behavioral approach.

School-wide Positive Behavioral Interventions and Supports

For decades, schools have predominately used a reactionary approach when dealing with students. Students must have failing grades to receive additional support and attention, students with behavioral issues must misbehave in class or hurt another student before a school psychologist might assess their issues, or a student must have a significant emotional episode before being referred for counseling. The trend of a proactive, rather than reactive, approach has been gaining popularity recently with the increased implementation of Response to Intervention

in schools. One of the outcomes of this shift has been the development of School-Wide Positive Behavioral Interventions and Supports (SWPBIS). School-Wide positive behavioral interventions and supports is a noncurricular prevention strategy designed to alter the school environment by improving discipline, reinforcement, data management systems as well as office referral and training procedures (Bradshaw et al., 2008). Positive behavior support is an application of behaviorally-based systems that is applied to all students in a school in both classroom and non-classroom environments. It is designed to enhance the capacity of the school by increasing the effectiveness of the school environment and strengthening the relationship between the school, the students, their families, and the community. This system aims to create and sustain school-wide, classroom, and individual support systems for all students by reducing the problem behaviors and increasing desired behaviors. School-wide positive behavioral interventions and supports has been found to improve the organizational health of a school over time as well. A study by Bradshaw and colleagues (2008) examined the health of 37 schools that implemented SWPBIS. Data from over 2,507 staff revealed a significant effect of SWPBIS on staff reports of the schools' overall organizational health, resource influence, and staff affiliation over a three-year period.

Implementing SWPBIS in a school can fit within the on-going school reform process, and requires four elements to be implemented effectively. These elements, as described by PBIS.org, include defining student outcomes that are academic and behavior targets. These outcomes are determined by educators including school psychologists, and are agreed upon by the student and his or her family. Additionally, the use of evidence-based interventions and progress monitoring data can be used to identify the effectiveness of the intervention and to make adjustments as necessary. The emphasis on prevention is an important similarity between SWPBIS and RtI.

While most RtI implementation efforts have focused primarily on academic curriculum and instruction, RtI functions in a similar and complimentary way with SWPBIS practices and systems (Sugai et al., 2000). Both systems' emphasis on prevention occurs at the primary, secondary, and tertiary tier, and while RtI focuses on academic prevention, SWPBIS focuses on prevention of behavioral issues by focusing on positive behavioral options, and rewarding students for displaying these behaviors both inside and outside the classroom. If both systems are functioning in concert correctly, each should have standard decision rules for movement up and down the continuum based on academic and behavioral performance. Children displaying problems should have specialized interventions based on their needs and the nature of their issue in the secondary and tertiary tiers. A SWPBIS example would be if a child had a significant behavioral or emotional disorder, a program using a structured level system and token economy could be used, that includes frequent social behavior progress monitoring, an individualized behavior contract system that includes continuous monitoring, prompting, and direct feedback as a secondary tier intervention. A tertiary tier may include cognitive-behavioral counseling sessions and potential psychopharmacological and person-centered process planning (Sugai, 2008).

Response to intervention provides a framework for organizing and increasing the efficiency in which evidence based interventions are chosen, implemented, monitored, and adjusted, and can be used to prevent and reduce academic problems in schools. When SWPBIS is implemented within that same framework, it can provide a similar means to prevent and reduce problem behaviors, and strengthen positive behaviors in students. A study by Bradshaw, Mitchell, and Leaf (2009) examined the effectiveness of SWPBIS in 37 elementary schools over a five-year period, and found that schools that implemented SWPBIS with high fidelity

experienced significant reductions in student suspensions and office referrals. Another study found that schools using SWPBIS with high fidelity had improved perceived safety of the school setting, as well as an improved proportion of third graders meeting or exceeding state reading assessment standards (Horner et al., 2009). Preventing the development of these problem behaviors, and reducing them if they arise, should be a high priority of teachers and school psychologists alike. This focus on prevention using timely screening, data and problem-focused decision making during intervention planning, and implementing and monitoring these interventions with integrity, would free up valuable resources that would otherwise be tied up dealing with behaviors problems in school. Like RtI, there is a lack of sufficient research exploring the link between SWPBIS and student connectedness and student climate. However, there is evidence to suggest that there is a strong link between the two. A study by Nichols and Steffy (1997) found that the successful implementation of SWPBIS programs promoted student self-efficacy, self-regulation, and goal oriented behavior in students. A separate study found that schools which used student-led conferencing within the SWPBIS framework increased overall student engagement, as well as students perceived ownership over their own learning (Kinney, 2005). There are numerous benefits associated with the use of SWPBIS, and a focus on preventing negative behaviors and strengthening positive ones provides an opportunity to build resilience in students during a critical time in their lives.

Multi-Tiered Systems and Supports and Resiliency

The implementation of Multi-Tiered Systems and Supports (MTSS) such as Response to Intervention and School-wide Positive Behavioral Interventions and Supports presents an opportunity for educators to use a proactive approach, rather than a reactive one. The changing of school and educator attitudes can have a significant impact on the relationships and

interactions among students, educators, school psychologists, and other professionals working at the school. The focus on building positive relationships between students, families, educators, faculty, and even the community can help build a sense of engagement and connectedness for the student. The sense of ownership that a student has over his or her own learning can spark an increase in motivation to learn and grow both inside and outside of the classroom. This shift to a more strengths-based approach has been gradual, but educators and school psychologists continue to emphasize and implement this approach in schools across the country (Oades-Sese et al., 2013).

The importance of SWPBIS within schools attempting to cultivate and strengthen resilience lies in the approach the educators take with the students, both those at-risk for and already displaying behavioral problems, as well as students without identified problem behaviors. The standard discipline method used by educators in the past revolves around reacting to specific student misbehavior by utilizing punishment-based strategies such as reprimands, loss of privileges, referrals, suspensions, and expulsions. These discipline methods strain the relationships that children have with their educators, further increasing negativity in the school environment. When this relationship is strained, the positive impact that an educator can have on a child is significantly reduced. Per PBIS.org (2014), research has shown that this type of discipline, especially when used in the absence of positive strategies, may be ineffective. The introduction of modeling and reinforcing positive behaviors both increases the probability of those behaviors being displayed both inside and outside of the classroom, as well as strengthening the relationship between student and educator, a crucial component necessary for schools to strengthen protective factors in their students.

A study by Lewis and colleagues (2002) examined the impact of positive behavioral support prevention and intervention strategies on the rate of problem behavior displayed by elementary school students during recess. The results indicated that directly teaching playground appropriate behaviors and the use of a group contingency to reinforce desirable behaviors significantly reduced the frequency of problem behaviors occurring. A separate study focused on the impacts of applying positive behavioral principles in an urban middle school, and findings showed a significant reduction in office disciplinary referrals and suspensions, as well as increases in standardized math and reading scores (Lassen, Steele, & Sailor, 2006). Another study by Caldarella and colleagues (2011) examined the effects of SWPBIS on school climate and student outcomes on two middle schools in the western United States. One school implemented SWPBIS principles such as school wide teaching of social skills, praise notes from teachers to students, posting of sch0ool rules, proactive screening for students at risk for emotional and behavioral disorders, and referrals of at-risk students for targeted interventions, while the control school did not. The results showed significant improvements in teacher ratings of school climate in the SWPBIS school while the control school stated the same or worsened. Additionally, there were statistically significant decreases in student tardiness, unexcused absences, and office discipline referrals when compared to the control school. By reinforcing the appropriate behaviors and teaching social skills, as well as providing the appropriate support for students at risk for emotional or behavioral difficulties, schools with SWPBIS provide more opportunities for social and emotional growth. These students learn positive ways for approaching challenging situations, and develop a sense of self-worth and an internal locus of control that is paramount in the development of resiliency. Additionally, the reduction in absences and office referrals only increases the opportunities for each child to learn and develop

in the classroom since they are present more often. The reduction in necessary discipline also reinforces growth in the relationships between educators and their students. These relationships are crucial in helping develop students' resiliency in the school. For a school psychologist working to increase a school's ability to strengthen protective factors and increase resiliency in its students, SWPBIS can be an effective option if utilized appropriately. In their book *Raising resilient children: Fostering strength, hope, and optimism in your child,* Brooks and Goldstein (2001) postulated that when children grow up in safe, supported, and engaged schools, they will develop skills that are associated with a resilient mindset. Skills such as learning to be more intrinsically motivated, learning flexible thinking and problem-solving skills, perspective taking, clear communication skills, realistic expectations and goal setting, and social emotional skills. Components of MTSS, such as goal setting, problem solving, social and emotional skills, and intrinsic motivation, tie directly into the development of these skills.

While there exists a gap in the literature base on the connection between schools implementing SWPBIS and resiliency in students, it is not difficult to imagine there being a strong correlation. Many of the components of a resilient child can be nurtured and strengthened in the school environment. Being able to manage stress well, having an internal locus of control, being able to define and reach one's goals, and having requisite levels of social competence are all traits that can be encouraged in school environments, and RTI and SWPBIS may be methods of doing so. Response to intervention, when appropriately implemented, provides students with the support they need to thrive academically. School-wide positive interventions and supports helps to provide students with the skills necessary to face challenges and frustrations in a productive manner, and reinforces positive coping skills. The impact that these systems can have can also strengthen the child's relationship with his or her educator as well as peers. The stronger

these relationships, the more likely the child will succeed both academically and socially. It is in an environment as supportive as this that children can truly develop the traits shown to produce resiliency in the face of hardship. In *Social, Emotional, Ethical, and Academic Education: Creating a Climate for Learning, Participation in Democracy, and Well-Being,* article by Jonathan Cohen (2006), he argues that the goals of education need to be reframed to prioritize social, emotional, and ethical competencies, in addition to academic learning. In his review of the current state of social-emotional education research, he states that refocusing on these competencies can promote an improved quality of life. A focus on building a positive relationship between educators and students will allow teachers to engage students better, and when problems arise, handle them in a way that focuses on how to behave in aversive situations, rather than punishing a child or adolescent for their negative behaviors. Schools can better harness these positive relationships by developing mentorship between students and educators, and better connecting with their families and communities as a result. Reframing the process to focus on a child's strengths and the problem at hand by using data and progress monitoring, as well as moving children between tiers of support as necessary, can help foster a sense of hope in students who are struggling.

Measuring Resilience

The study and measurement of resilience in children continues to focus on the core functional domains including the home, the school, the self, and the community. Understanding these factors is the first step in encouraging resilience. These factors can be used to enhance the existing capabilities of children in their schools, and to encourage healthy trajectories and encourage adaptation during stressful events (Zulkoski & Bullock, 2012). Simply acquiring the knowledge is only the first component. Developing an understanding of both the protective

factors a student needs to succeed, as well as an awareness of the risk factors facing that student, is important when determining an appropriate must meet with evidence-based intervention.

There are numerous ways of measuring resilience, including scales, checklists, interviews, as well as numerous resilience-focused interventions. The research base highlights the importance of using standardized assessment procedures, as well as evidence-based and child-focused interventions (Naglieri & LeBuffle, 2005; Luthar & Cicchetti, 2000). Measuring and improving school climate is an important, and research-based strategy that supports both the child and the school as a community, and effective practices support children developing the skills, knowledge, and dispositions required to become productive and happy individuals, able to adapt to stressful circumstances and thrive upon leaving the school system (Cohen, 2013).

Despite the number of different measures that have been used to study resiliency, there is no one measurement that is considered the 'gold standard' for the use of measuring resilience. A methodological review of resilience measurement scales was published by Windle, Bennet, and Noyes (2011), in which they examined the many current measurements by reviewing peer reviewed journal articles in which resilience was assessed. They found that each of the measurements they analyzed had been missing certain psychometric properties, but that the Connor-Davidson Resilience Scale, the Resilience Scale for Adults, and the Brief Resilience Scale had the best overall psychometric ratings. However, each of these three scales have been designed for use measuring resilience in adults.

One of the most prominent measures of resilience in children is the Child and Youth Resilience Measure (CYRM). This measure, created by the Resilience Research Centre, measures overall resilience, as well as three subcategories: individual traits, relationship to caregivers, and contextual factors that facilitate a sense of belonging ("Child and Youth

Resilience Measure", 2015). The standard CYRM is a 28-item measure that accounts for cultural and contextual diversity across youth populations. A study by Liebenberg, Ungar, and Van de Vijver (2011) presented the validation of the CYRM-28 among two large samples of Canadian children with complex needs, and found support for the measurement as a reliable and valid self-report instrument that accurately measures all three subcategories and resilience processes in the lives of youth with complex needs.

Two other common resiliency measures are the Devereux Early Childhood Assessment Program (DECA), and the Devereux Student Strengths Assessment (DESSA) (Hall, 2010). The DECA is part of the Devereux Early Childhood Initiative, and is designed for two to five-year-old children. It is based on the identification of resilience and protective factors divided into four subscales: initiative, self-control, attachment, and behavior concerns. The psychometric data are adequate and the DECA has been used in many, mostly unpublished, studies. The DESSA is a standardized, norm-references behavior rating scale used to assess the social-emotional competencies that serve as protective factors for children ages five through fourteen. The subscales measured in the DESSA are self-awareness, social awareness, self-management, goal-directed behavior, relationship skills, personal responsibility, decision making, and optimistic thinking. Results of psychometric studies using the DESSA have shown that the measure can reliably differentiate between students with and without social, emotional, and behavioral problems, and has strong convergent validity with the BASC-2 and BERS-2 (Hall, 2010).

In terms of measuring school climate, there are numerous scales and checklists with differing validity and reliability. School climate is best evaluating with surveys that have been developed in a scientific manner and include recognizing student, parent and school personnel voice, as well as assessing all the dimensions that shape the process of teaching, learning, and

student's experiences in the school building (Cohen et al., 2009). The most common research-based measure of school climate today is the Comprehensive School Climate Inventory (CSCI), which is used to detail the strengths and potential needs of a school that can point to what areas educators and faculty may need to focus on to improve their own school climate.

Another movement towards measuring and understanding child resilience is being spearheaded by The California School Climate, Health and Learning Survey System (Cal-SCHLS). The purpose of this program is to collect comprehensive school data to provide educators with the data to effective improve schools, foster student achievement and successful development, and train and retain quality teachers ("About the Cal-SCHLS System", 2015). This program utilizes measures of both school climate, through the California School Climate Survey (CSCS), as well as the California Healthy Kids Survey (CHKS) to create a comprehensive set of data designed to help schools improve and to gain a more informed understanding of how to improve students' development and well-being. The CHKS survey contains a module focused on the development of resilience within the students, called the Resilience Youth Development Module (RYDM). This module measures factors empirically tied to resiliency, such as environmental assets in the school and in the home, as well as internal assets associated with resilience such as communication skills, empathy, problem solving skills, self-efficacy, and goals and aspirations. This measure has been shown to have the necessary validity and reliability required to accurately assess the development of resilience in students (Furlong et al., 2009; Hanson & Kim, 2007; Sharkey, You & Schoenbelen, 2008). The CHKS also includes the School Connectedness scale, which is designed to measure the degree to which a student feels a close bond with his or her school, and this scale has also been validated by research (McNeely, Nonnemaker, & Bloom, 2002). The CSCS survey assesses six school

climate domains, including safety and connectedness, caring relationships with adults, meaningful participation, substance use at school, bullying and discrimination, and delinquency. This scale has also been shown to be a valid and reliable measure of the student perceptions of the school climate (Voight & Hanson, 2012; Bear Gaskins, Blankm & Chen, 2011; Fraser, 1998). Overall, the Cal-CHLS survey system is a tool designed and validated to measure the traits empirically tied to resiliency while also validly assessing the child's perception of the school.

Conclusion

Resiliency, or the capacity for successful developmental outcomes despite adversity or threatening circumstances and challenges (Masten, Best, & Garmezy, 1990), is determined through a combination of factors that are innate, family-based, community-based, or potentially school-based. It is important for those working in schools to recognize the importance of students' social and emotional wellbeing in addition to the importance of academic success. Schools can strengthen resilience by developing traits such as social competence, promoting positive relationships between students and faculty, communicating high expectations in academic and social performance, as well as maximizing opportunities for meaningful participation in the school environment. (Brooks, 2006). Schools with a higher sense of community have been found to have significantly lower student drug use and delinquency, suggesting that school context, specifically school connectedness, may moderate relationships between individual risk and protective factors (Battistich & Hom, 1997).

Numerous studies have been undertaken recently to support the importance of a positive school climate in promoting academic achievement, school safety, dropout prevention, teacher retention, healthy social interaction, and wellbeing. The role of the principal as a leader, the

systematic and individual practices that supported interpersonal engagement, the importance of relationships, high expectations, consistency and fairness, communicative competence, and the effective use of resources have all been found to successfully promote positive school climate (Smith, Connolly, and Prysesky (2014).

A focus on the improvement of school climate should be viewed as "a practical, prosocial strategy that supports all children and their ability to become healthy, lifelong learners" (Cohen, 2013, p. 421). The improvement of school climate provides the opportunity for a broad effort that recognizes and supports the efforts towards effective risk prevention, mental and physical wellbeing, and the promotion of positive relationships and social skills. It also provides the opportunity to foster resilience in these children, especially those in high-risk areas. These efforts may ultimately improve the developmental trajectories of at-risk children, and provide the difference between a healthy adulthood and a maladjusted adulthood. Research has shown that measuring and focusing on the promotion of a positive school climate that supports the child, the educator, and the community can promote the development of the student both inside and outside of the school. Additionally, school connectedness has been found to be protective against each a multitude of health risks, as well as positively correlated with higher academic achievement, including grades and test scores, as well as overall academic attendance and completion rates have been positively associated with school connectedness (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson et al., 2000).

The purpose of this study will be to examine the potential relationship between school climate, and more specifically school connectedness, with the development of protective factors and resilience in children. Does a positive school climate correlate with increased growth in protective factors in children, and does a less positive school climate reduce growth in these

same areas? Additionally, which components of school climate appear to be more closely correlated with the development of these traits, such as school connectedness, safety, and relationships with teachers and peers?

Summary

This chapter has provided the literary background of resiliency, school climate, and school connectedness. This historical background information was necessary to provide an understanding of how the underlying factors that influence resiliency may be connected to the concepts of school climate and school connectedness. It also provided a deeper exploration of the theoretical underpinnings that connected these areas of research as well as provide a broader context for how these distinct concepts and areas of research may connected to one another. In the following chapter, the proposed research methods and design used to answer the current research questions will be discussed.

Chapter III: Methods

The purpose of this study is to explore the potential relationship between school climate and resilience in children and adolescents. This study will also examine the correlations between multiple components of resilience and how they relate to perceptions of school climate as well as school connectedness. This chapter will outline the participants, measures, research methodology, and data analysis procedures to be used in the analysis. The following research questions will be answered: Is there a difference between students with different levels school climate perception when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness, and 2) Is there a difference between students with different levels school connectedness perception when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness?

Participants

The California Healthy Kids Survey (CHKS) survey was developed in the late 1990's by the California Department of Education (CDE) to measure health risk and resilience information within California schools, districts, and communities as part of the No Child Left Behind Act (Sharkey, You, and Schnoebelen, 2008). This survey is administered in all California schools to collect information on student needs, to justify program spending, guide the development of programs, as well as monitor student progress. The CHKS survey, as well as other surveys such as the California School Climate Survey and others, are a part of the comprehensive California School Climate, Health, and Learning Survey (Cal-SCHLS) that is administered throughout all participating public schools in California. For the purposes of this study, the 2015-2016 academic year data from the Resilience Youth Development Module (RYDM) and School Climate Module of the CHKS was analyzed. The participants (n = 4,386) in this study were the

students in the California schools who had completed each CHKS survey for the 2015-2016 academic year, and this sample was broadly representative of different socioeconomic levels as it is representative of the entire state of California, from which it was gathered. The data used for this study had already been collected, and had already been used for program evaluation and student tracking, among other uses, within the California school system.

Measures

This is a correlational study that used data from the Cal-SCHLS to measure students' resilience and perception of school climate. The data set used was the Resilience Youth Development Module (RYDM) and the School Climate Module from the California Healthy Kids Survey (CHKS). The CHKS is the largest statewide survey of resilience, protective factors, and risk behaviors in the nation, per California Department of Education (California Healthy Kids Survey, 2016). The survey was developed to better understand the relationship between students' health behaviors and academic performance, as well as to improve efforts to help guide the development of effective health, prevention, and youth development programs.

Resilience. The RYDM module of the CHKS is focused on the development of resilience within the students. This module assesses environmental assets, such as school, home, community, and peers, as well as internal assets, such as cooperation and communication, empathy, problem solving, self-efficacy, self-awareness, goals, and aspirations associated with positive youth development and school success (Hanson & Kim, 2007). The RYDM has gone through numerous modifications since its creation and initial validation, but the module has lacked a thorough analysis of reliability and validity (Furlong et al., 2009; Hanson & Kim, 2007). However, recent empirical studies have supported the internal consistency and reliability of the RYDM and its psychometric properties. A study by Sharkey, You, and Schnoebelen

(2008) examined the current state of the RYDM and its psychometric properties, and found the module to be a "psychometrically sound, parsimonious measure of resilience" (p. 414). Using a diverse group of adolescents as their sample, the authors' findings suggested a three-factor structure consisting of Self-Concept, Interpersonal Skills, and Goals and Aspirations as the RYDM's measure of internal resilience. They concluded that their examination provides a foundation for future research using the RYDM as an empirically validated measure of resilience.

School Connectedness. Another measure included in the CHKS is the School Connectedness Scale, which is a five-item scale constructed from items originally included in the National Longitudinal Study of Adolescent Health (McNeely, Nonnemaker, & Blum, 2002). This subscale was designed to measure the degree to which a student feels bonded towards his or her school, and includes items such as "I am happy to be at this school", and "I feel close to people at this school". According to a study by McNeely, Nonnemaker, and Blum (2002), this subscale has an internal consistency reliability of .79.

School Climate. Also included within the CHKS are questions related to student perception of school climate. The questions fall within three domains: Supports and Engagement, and Violence and Substance Use at School, and Truancy. These domains are then combined to create the School Climate Index (SCI). The SCI is a state-normed, school level descriptive tool that was developed to assist in school to school comparisons to identify schools in need of interventions for improving school climate. To develop the SCI, researchers identified CHKS survey items and school-level incident data that measure important aspects of the school environment that are aligned with the U.S. Department of Education's S3 School Climate Model (Jennings, 2010). Questions under the Supports and Engagement domain measure high

expectations and caring relationships, perceived school safety, opportunities for meaningful participation, and the school connectedness items described above. Questions under the Violence and Substance Use at School domain measure physical violence perpetration on school property, physical and emotional victimization at school harassment and bullying, and substance use at school. The domain of truancy is a small portion of SCI measured through one item on the CHKS.

Data Collection

The CHKS has been used as part of the Safe and Supportive Schools program since 2003, in almost 900 school districts, over 7,000 schools, with over one million students participating in the survey every two years, resulting in one of the largest databases on adolescent educational development (Austin, 2013). The information provided by the series of surveys is used by the California Department of Education for numerous purposes, including planning, program funding, evaluation, and implementation of new programs. According to the official CHKS website by WestEd, the survey is conducted in grades 5, 7, 9 and 11, rather than other grades, for several reasons. These years are considered transition years in the developmental lives of adolescents. Grade 7 is generally when students begin secondary school, and grade 9 is generally when students begin high school. Additionally, grades 5 and 7 are considered natural baselines for comparisons within teenage populations. Grade 11 is considered the best final year of survey because research suggests many students who have engaged in risky behaviors drop out by the end of grade 12, and the data for these students would remain incomplete.

Descriptive Statistics

The present study analyzed the 2015-2016 academic year data from the Resilience Youth Development Module (RYDM) and School Climate Module of the California Healthy Kids

Survey. The students who participated in the study ranged between the ages of 10 and 18, except for 14 who reported being younger than 10 years old, and 60 who reported being older than 18 years old. Each of the students were in either the 7th (28.6%), 9th (27.5%), or 11th (26.6%) grade. Males represented 47.8% of the participants, while 51.3% were female. In terms of race, the students reported as White (32.5%), Asian (12.7%), Black or African American (3.7%), American Indian or Alaska Native (2.6%), Native Hawaiian or Pacific Islander (.9%), or a mix of two or more races (37.6%).

Research Design

This study used a correlational research design using observational data obtained through the surveys administered as part of the California Healthy Kids Survey. This type of design was chosen due to the both practical and ethical limitations that would arise in attempting to control which students were educated in a positive school climate or a negative school climate. The variables are as follows:

Independent Variables. The independent variables for this study were student perception of school climate as well as reported student connectedness. School climate was operationalized through three domains: Supports and Engagement, and Violence and Substance Use at School, and Truancy. These domains are then combined to create the School Climate Index (SCI). The survey includes forty-six questions related to school climate. Each question has four possible answers: Strongly Disagree, Disagree, Neither Disagree nor Agree, Agree, and Strongly Agree. These responses are represented numerically as 1-5, respectively. In the present analysis, the answers to these questions were combined to create a Total School Climate variable. School connectedness was operationalized via five questions included as part of the base CHKS survey that measured student perceptions of how close they feel to other students, if

they are happy, if they feel they are part of the school, if the teachers treat students fairly, and if they feel safe in their school. Each question has four possible answers: Strongly Disagree, Disagree, Neither Disagree nor Agree, Agree, and Strongly Agree. These responses are represented numerically as 1-5, respectively. In the present analysis, the answers to these questions were combined to create a Total School Connectedness variable.

Dependent Variables. The outcome variables for this study were the four constructs of internal resilience as measured by the RYDM. These constructs are Empathy, Problem-Solving Skills, Self-Efficacy, and Self-Awareness. Each question has four possible answers: Not at All True, A Little True, Pretty Much True, Very Much True, represented numerically using 1 through 4. While the original survey includes 42 questions related to resilience, the items were narrowed down to 12 questions measuring the internal assets of resilience based on an analysis by Hanson and Kim (2007) and Furlong, Ritchey, and O'Brennan (2009). The questions that were removed were found to function differently based on the race of the respondent, function differently based on the gender of the respondent, or were found to cross-load on multiple factors during analysis.

Power analysis. The power analysis program *GPower 3.1.9.2* was used to calculate the number of participants that are needed to conduct a regression analysis with a specified effect size. Using the MANOVA: Global Effects statistical test, with the parameters of a .25 effect size, a .05 alpha level, a .95 power level, 3 groups (low, high), and 12 response variables based on the 12 questions used from the RYDM measure, *GPower* indicated that 116 participants will be needed to elicit a medium effect size. Due to the number of participants in the original study, the researchers do not foresee that sample size will be a concern.

Procedures

The data used for the purposes of this study was obtained from the California Department of Education. The data used for this study came from numerous schools throughout California, with differing demographics and characteristics. The data were obtained through the California Healthy Kids Project at WestED, and access was granted digitally after a formal request and documentation was provided to the California Department of Education.

Data Analysis

Questions one was analyzed using a multivariate analysis of variance (MANOVA). The one-way MANOVA was used to determine whether there were any differences between the independent groups of students, sorted by their perceptions of school climate, and the dependent variable, their level of resilience, broken down into Empathy, Problem-Solving Skills, Self-Efficacy, and Self-Awareness. Questions two also was analyzed using a MANOVA. This one-way MANOVA was used to determine whether there were any differences between the independent groups of students, sorted by their perceptions of school connectedness, and the dependent variable, their level of resilience, broken down into Empathy, Problem-Solving Skills, Self-Efficacy, and Self-Awareness.

Research Question One

Is there a difference between students with different levels school climate perception (low versus high) when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness? A MANOVA will be used to answer this research question because this analysis will allow the determination of between group differences based on level of school climate perception (low, high), and how these differences impact reported levels of resilience determined by the RYDM measure.

Research Question Two

Is there a difference between students with different levels school connectedness perception when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness? A MANOVA will be used to answer this research question because it will allow for the determination of differences between groups based on school connectedness (low, high) and how this impacts the respondents reported level of resilience, as measured by the RYDM measure.

Potential Limitations of Design and Data Analysis

The current study intended to use the California Healthy Kids Survey data set to determine if there is difference between students with different levels school climate perception when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness, and if there a difference between students with different levels school climate perception when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness. Given the nature of the exploration between a potential correlation between student perceptions and school climate, the study will not elucidate directionality or the possibility of a third variable effecting both resilience and perception of school climate. It may be that students in more positive school climates demonstrate greater strength of resilience, or that more resilient students perceive their school climates more positive than less resilient students. Another potential limitation is that the CHKS may not be considered the optimal measurement tool for either resilience, school climate, or school connectedness, if these concepts were to be measured individually. This data set, however, is a valid and reliable measure that conveniently includes data for all three of these variables, and will serve as a tool to explore potential correlations between each of them.

Summary

This chapter provided a detailed examination of the research methods and design that will be used in the current study. It also provided an extensive look at the data being used to explore the potential connections between school climate, school connectedness, and resiliency. The following chapter will discuss the data analysis and results of each research question.

Chapter IV: Results

Introduction

The purpose of the present study was to examine the potential relationship between school climate, school connectedness, and the development of resilience in children and adolescents. This study examined the correlations between four constructs of resilience (Empathy, Problem-Solving Skills, Self-Efficacy, and Self-Awareness) and how they relate to levels of school climate and school connectedness, as measured by the students surveyed through the California Healthy Kids Survey (CHKS). To explore the relationship between resilience and school climate, a MANOVA was used to test for between group differences between groups of students with low and high perceptions of school climate. A separate MANOVA was also conducted to explore the relationship between resilience and school climate by analyzing between group differences between groups of students with low and high perceptions of school connectedness. and low and high reported levels of school connectedness.

The chapter concludes with a summary of the result and findings to answer the two research questions:

1. Is there a difference between students with different levels school climate perception (low versus high) when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness?
2. Is there a difference between students with different levels school connectedness climate perception (low versus high) when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness?

Data Cleaning

Due to missing data, numerous cases had to be removed prior to analysis. While 20,0535 students responded to the RYDM survey, only 5,407 students responded to both the RYDM survey and the School Climate survey. After removing cases containing missing data, which totaled ~20% of the cases, the final number of respondents totaled 4,368 (n = 4,368).

To compare groups of students based on their total levels of school climate, their responses to climate focused questions were totaled. Based on the quartiles of these totals, the students were grouped into those with low perceptions of school climate and high perceptions of school climate. Students whose responses to the school climate focused questions totaled below the 25th percentile (scored less than 147), were placed in the Low School Climate group. The students whose responses totaled in the 75th or higher percentile (189 or higher) were placed into the High School Climate group. The same was done for students' School Connectedness scores. Students whose total school connectedness fell at or below the 25th percentile (16 or fewer) were placed into the Low School Connectedness group, and students whose scored in the 75th percentile or higher (22 or more) were placed in to the High School Connectedness group. Final group totals were 1,124 students in the Low School Climate group, 1,097 students in the High School Climate group, 1,145 students in the Low School Connectedness group, and 1,118 students in the High School Connectedness group. Finally, seven items had to be reverse coded before analysis

Assumptions

Before analysis, the appropriate assumptions were checked to ensure the data could be analyzed and interpreted. The assumption that two or more dependent variables should be measured at the interval or ratio level was confirmed as the dependent variables of Total Self-

Efficacy, Total Empathy, Total Problem-Solving, and Total Self-Awareness are measured at the interval level. The assumption that the independent variables should consist of two or more categorical, independent groups was confirmed as both the school connectedness and school climate groups were split in to two levels, high and low. The assumption of independence of observations was met as the participants can only be in one group, so there is no relationship between the observations in each group. Regarding the assumption of an adequate sample size, the final sample size of 4,307 was deemed sufficient for the purposes of the present analysis. To check the assumption of no univariate or multivariate outliers, univariate outliers were eliminated using boxplots, while multivariate outliers were removed by calculating Mahalanobis Distance and removing cases based on the appropriate chi square value. In terms of multivariate normality, this assumption is considered met due to the large sample size. The assumption that there is a linear relationship between each pair of dependent variables for each group of the independent variable was met because of the moderate to high correlation among the dependent variables. The assumption of homogeneity of variance was not met, due to a significant result from Box's M test of equality of covariant matrices. As a result, Pillai's trace will be used for the interpretation of this analysis. Finally, the assumption that there is no multicollinearity was met due to the moderate to high correlations among the dependent variables. In summary, all of the necessary assumptions were met to proceed with the analysis, except for homogeneity of variance. This result will be remedied using Pillai's trace when interpreting the results of the analysis.

Results

Table 1: MANOVA Results for School Climate

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Observed Power[c]
School Climate Category	Pillai's Trace	.302	239.391[b]	4.000	2216.000	.000	.302	1.000

Table 2: School Climate Test of Between-Subjects Effects

	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[e]
School Climate Category	Total Self-Efficacy	5456.037	1	5456.037	727.696	.000	.247	1.000
	Total Empathy	3020.057	1	3020.057	568.449	.000	.204	1.000
	Total Problem-Solving	2312.948	1	2312.948	749.403	.000	.252	1.000
	Total Self-Awareness	3565.772	1	3565.772	667.493	.000	.231	1.000

School Climate and Resilience

To test whether students with a more positive perception of school climate demonstrated greater internal resilience factors compared to students with lower perception of school climate, a One-Way MANOVA was conducted. In this MANOVA design, the impact of the independent variable, defined as High or Low School Climate, was compared to the dependent variables of Total Self-Efficacy, Total Empathy, Total Problem-Solving Skills, and Total Self-Awareness.

The results of the MANOVA were found to be statistically significant (Pillai's Trace = .302, F(4,2216) = 239.391, P<.001, Partial Eta Squared = .302). The results indicate that students with perceptions of high school climate demonstrate a statistically significant difference in levels of internal resilience factors compared to students with low perceptions of school climate, and that 30% of the difference in resilience factors can be explained by their perception of school climate.

Table 3: MANOVA Results for School Connectedness

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Observed Power[c]
School Connectedness Category	Pillai's Trace	.261	199.824[b]	4.000	2258.000	.000	.261	1.000

Table 4: School Connectedness Test of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Observed Power[e]
School Connectedness Category	Total Self-Efficacy	4914.268	1	4914.268	639.046	.000	.220	1.000
	Total Empathy	2353.500	1	2353.500	444.620	.000	.164	1.000
	Total Problem-Solving	1894.158	1	1894.158	577.481	.000	.203	1.000
	Total Self-Awareness	3306.097	1	3306.097	593.870	.000	.208	1.000

School Connectedness and Resilience

To test whether students with a more positive perception of school connectedness demonstrated greater internal resilience factors compared to students with lower perception of school connectedness, an additional One-Way MANOVA was conducted. In this MANOVA design, the impact of the independent variable, defined as High or Low School Connectedness, was

compared to the dependent variables of Total Self-Efficacy, Total Empathy, Total Problem-Solving Skills, and Total Self-Awareness. The results of the MANOVA were found to be statistically significant (Pillai's Trace = .261, $F(4,2258) = 199.824$, $P<.001$, Partial Eta Squared = .261). The results indicate that students with high school connectedness demonstrate statistically significant levels of internal resilience factors compared to students with low perceptions of school connectedness, and that 26% of the difference in resilience factors can be explained by their perception of school connectedness.

Summary

This chapter provided an overview of the processes involved in using the CHKS data to explore the potential connections between school climate, school connectedness, and resiliency. It also provided a detailed exploration of the results of the results of the statistical analysis, including descriptive statistics of the sample, the results of the separate MANOVA analyses, and the statistical significance of the findings. The following chapter will explore the implications of the results and provide a broader context for what these results mean, whether the research questions posed were sufficiently answered, possible limitations to the present study, and what steps may be taken in the future to further explore these areas of research.

Chapter V: Discussion

Education continues to evolve as focus shifts from the test-focused orientation that legislation such as No Child Left Behind prioritized to a broader definition of academic success that is less contingent on the results of standardized tests. A renewed focus by school leaders on developing a more positive school culture and engaging classroom and utilizing positive relationships within the school, have increased the potential for improved academic outcomes (Bosworth and Earthman, 2002). Schools are in a unique position to have a life-changing impact on any child who walks through the door on a day to day basis, many of whom face emotional and physical trauma in their homes and communities that put them at an increased risk for negative life outcomes. The renewed emphasis on student perceptions and student-teacher and student-student relationships have opened the possibility to examine how these factors influence the social-emotional development of a child during his or her time in school.

The purpose of this study was to explore the potential relationship between both school climate and school connectedness on the development of resilience within children and adolescents. The study used data obtained through the California Healthy Kids Survey, taken during the 2015-2016 academic year from 7th, 9th, and 11th grade students. Each question was answered through a one-way MANOVA analysis to determine what differences existed between students grouped into high and low categories of school connectedness and high and low categories of school climate perceptions, and their ratings on the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness. The study answered the following questions:

1. Is there a difference between students with different levels school climate perception (low versus high) when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness?
2. Is there a difference between students with different levels school connectedness perception (low versus high) when examining the resilience-linked traits of self-efficacy, empathy, problem-solving skills, and self-awareness?

This chapter discusses the present study's findings in the relationship to current and past literature and research on the topic of resilience, school climate, school connectedness, the relationships between these components, and the possible implications of the present study. The chapter will discuss how the present findings may be utilized to further the evolution of educational practice, and what the next steps may be in continuing the process of improving academic and social-emotional outcomes of children in the school setting. Finally, the chapter concludes with a discussion of the limitations of the present study, and what direction future research on these topics may be most beneficial.

Research Question One: School Climate and Resilience

The California Healthy Kids Survey measured school climate through forty-six questions related to school climate that were divided into three domains: Supports and Engagement, Violence and Substance Use at School, and Truancy. The present analysis does not break down school climate into these three domains, but rather examines the construct of school climate as a whole, and the results provide important information about how the perceptions of school climate are related to traits linked to resilience. The present study utilized twelve questions within the Resilience and Youth Development Module (RYDM) to measure resilience, and broke down the constructs of resilience into four domains: Empathy, Problem Solving Skills, Self-

Efficacy, and Self-Awareness. The results of the MANOVA analysis compared students with high versus low reported perceptions of school climate to analyze differences in their reported levels of self-efficacy, empathy, problem-solving skills, and self-awareness, as measured by the RYDM module of the CHKS. The results of the analysis indicated that students' perceptions of their school climate made a statistically significant difference in their reported self-efficacy, empathy, problem solving skills, and self-awareness. More specifically, the perception of school climate explained 24.7% of the students' reported self-efficacy, 20.4% of their total empathic ability, 25.2% of their problem-solving ability, and 23.1% of their total self-awareness ability, per the participant's own reporting. These results demonstrated that there is a statistically significant difference in these reported traits based on whether a student perceives his or her school climate positively or negatively. They indicated that students' perceptions of their school climate are closely related to their resiliency-linked traits. Students who demonstrated a positive perception of their school climate reported higher levels of self-efficacy, problem-solving skills, empathy, and self-awareness when compared to students with low, or negative perceptions of their school climate.

Research Question Two: School Connectedness and Resilience

The California Healthy Kids Survey measured school connectedness through a five-item scale constructed from items originally included in the National Longitudinal Study of Adolescent Health. These questions were designed to measure the degree to which a student feels bonded towards his or her school. As described above, the present study utilized 12 questions from the RYDM questions to measure resilience, and broke down the constructs of resilience into four domains: Empathy, Problem Solving Skills, Self-Efficacy, and Self-Awareness. The results of this analysis also indicated a statistically significant difference in these

resiliency-linked traits based on whether a student reported high or low feelings of school connectedness. More specifically, the perception of school connectedness explained 22% of the students' reported self-efficacy, 16% of their total empathic ability, 20.3% of their problem-solving ability, and 20.8% of their total self-awareness ability, per their own reporting. As with school climate, these results indicated that students' perceptions of their connection to their school are closely related to their resiliency-linked traits. Students who demonstrated a closer connection to their school reported higher levels of self-efficacy, problem-solving skills, empathy, and self-awareness when compared to students with a lower perceived connection to their school.

Conclusions

Given the substantial physical, intellectual, emotional, and social development that occurs in children and adolescents, and the amount of time spent within a classroom, school is a highly influential component in any child's life. Teachers, faculty, school psychologists, and any person with whom a child interacts with while at school has an important role to play in each student's development. While academic growth is often considered the primary objective for a child in the classroom, there is substantial opportunity for growth in areas of emotional intelligence, social skills, and in the development of resilience and protective factors as well. The results of the present study have provided additional insight into the close relationship between perceptions of school climate, and perceptions of school connectedness, and traits linked to resilience. While the results of the analyses are limited by the scope of the California Healthy Kids Survey as a measurement tool, they still provided insight into the strength of the relationship between school climate and school connectedness can have on the resilience of children across the nation.

School Climate and Resilience

Within the context of the California Healthy Kids Survey, the results of the analysis indicated that students with high perceptions of school climate demonstrated higher levels of Self-Esteem, Empathy, Problem-Solving Skills, and Self-Awareness. These traits, which have been linked to resiliency in previous research, suggest that the students from whom the data was collected do indeed demonstrate higher levels of resilience when compared to students with low perceptions of school climate. The differences between the high and low school climate perception groups were substantial. For each of the four resiliency traits measured, the analysis indicated a significant difference among the students surveyed that could be directly attributed to their perceptions of school climate. The results provided more evidence of the importance of maintaining a positive school climate to increase the development of these resilience-linked traits.

While the dimensions of resilience as measured by the RYDM don't cover all the traits linked to resilience, they are closely tied to the traits of social competence, a sense of self-worth, emotional regulation ability, social competence, and an internal locus of control. The results of the analysis indicated that these skills are stronger in children who perceive their schools more positively compared to children who perceive their schools less positively. While the present study was not intended to draw a line of causality between school climate and resilience, the relationship between the two has been confirmed by this study. It could be that students with higher resilience perceive school climate more positively than less resilient children, but these results are important nonetheless. The benefits of positive school climate have already been shown to improve academic outcomes, reduce problem behaviors, increase attendance, decrease retention, and promote healthy social interactions, and through this study the additional benefit

of stronger resilience can be added to the conversation. Additionally, past research has demonstrated that these traits become stronger over time in children educated in better environments (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson et al., 2000). While these benefits have been theorized by leaders in resilience research, this study has provided empirical evidence of the relationship between school climate and resilience. While this study does not provide evidence of causality, current theory on resilience indicates that this is relationship is possible (Brooks & Goldstein, 2001). Schools are in a key position to dramatically influence students' lives for the better, and the evidence that strong school climates have the potential to foster resilience in their students highlights an important and often underappreciated role that schools play in a child's overall development.

School Connectedness and Resilience

Within the context of the California Healthy Kids Survey, the results of the analysis indicated that students with high perceptions of school connectedness demonstrated higher levels of Self-Esteem, Empathy, Problem-Solving Skills, and Self-Awareness. The differences between the high and low school climate connectedness groups were substantial. For each of the four resiliency traits measured, the analysis indicated a significant difference among the students surveyed that could be directly attributed to their perceptions of school connectedness.

As was the case with the relationship between school climate and resilience, school connectedness has often been theorized to have additional benefits and influence on the development of students within the classroom. This study has provided evidence that this connection exists, and is a significant. The results from the CHKS indicated that the belief held by students that adults and peers in their school care about both their learning and their wellbeing as individuals is closely related to traits which can have positive impacts on their lives and their

development. While this relationship is a complex one, the connection that students can make with their teachers and peers has the potential to increase their resilience, and their ability to cope with the challenges that they face throughout their lives. Previous research has shown that students who felt more connected with their schools were less likely to engage in risk-taking behaviors such as drug use, alcohol use, gang involvement, violence, and other behaviors (Resnick et al., 1997). The present study indicated that not only are these students less likely to engage in risk-taking behaviors, they are also becoming better equipped as individuals to face any hardships that may occur throughout their lives. The relationship between school climate and school connectedness is well-established theoretically, and while the results of the present study indicate that the benefits of school connectedness may be potentially less significant as those brought about through a positive school climate, they are very closely related. As with the results from the school climate analysis, these results do not indicate causality between school connectedness and resilience. It could be that more resilient students are more inclined to feel connected to their school. However, past research indicates that this is likely not the case, and that school connectedness does impact the development of students in a positive way (Klem & Connell, 2004; Barber & Olsen, 1997; Battin-Pearson at al., 2000; Resnick et al., 1997).

Limitations

The present study is limited by several factors. First, the California Healthy Kids Survey may not be considered the gold-standard in either the measurement of resilience, school climate, or school connectedness. The survey is well-developed for its intended purpose of monitoring the growth and outcomes of students throughout California, but it was not designed with the intention of scientific study. However, it did provide a valid and reliable source of data on the perceptions of school climate, connectedness, and numerous traits linked to resiliency. This data

served as an avenue to explore the potential connection between these factors, and was not intended to be used to draw a link of causality or directionality. The present study was unable to determine whether students in a more positive school climate demonstrate greater strength of resilience, or if more resilient students just perceive their schools more positively. While the theoretical foundation of the study provides a clear indication that school climate and connectedness do positively influence the growth of resilience, the study is limited to highlighting the relationship and not making causal conclusions. A longitudinal study in which students were randomly assigned to a positive and negative school climate would be required to make such conclusions. Additionally, the use of measures that are specifically designed to measure school climate, school connectedness, and resilience would increase the generalizability of the results.

Another limitation for the present study is that the data used for the analyses are the perceptions of school climate, school connectedness, and resiliency-linked traits. A study in which these variables are measured in a less subjective way by using a more empirical and observable assessment procedure would be beneficial. Using non-objective data creates the potential for students to report perceptions that are impacted by bias and perceptual error. Additionally, the methods through which students were assigned into groups of high or low school climate or connectedness may be considered a limitation. This categorization led to the loss of some data that may be important in future analyses. Utilizing continuous data rather than categorical data may provide additional insights into the relationships between these variables. Finally, there is the potential of a third variable problem. It could be that an additional factor may be influencing both the perception of school climate and the development of resilience. While

the current literature on the topic of school climate and resilience does not imply an additional variable that may influence both things, it is not impossible that one may be discovered later.

Implications

While the primary focus of schools will continue to be the transfer of knowledge and the academic outcomes of students, there continues to be a shift towards the development of students as successful and healthy individuals overall. Movements such as the Response to Intervention style of teaching or the use of School-Wide Positive Behavior Interventions and Supports have encouraged the development of student strengths. Research continues to demonstrate the effectiveness of these approaches, and has led to increased demand and investment in these strength-focused systems within the educational system. There continues to be a concern that there are not enough resources to provide investment into the preventative nature of these strength-focused systems when there are so many children with behavioral and academic deficiencies, but the continued research into the outcomes these programs keep providing good reason to continue their development and implementation in schools across the nation. The benefits of a positive school climate and school connectedness include increased academic success, higher attendance and completion rates, reduced teacher turnover, increased school safety, reduced problem behavior and subsequent disciplinary action, and lower student retention rates. (Cornell, Sheras, Gregory, & Fan, 2009; Ennis, 1998; Ladd, Birch, & Buhs, 1999; Voelkl, 1995; Lleras, 2008; Masten & Reed, 2002; Thapa, Cohen, Higgins-D'Alessandro, & Guffey, 2012) The addition of resilience has the potential to substantially increase the attention and resources that programs designed to improve climate and connectedness receive.

Evidence continues to highlight the benefits of preventative programs in schools. A focus on the mental and physical wellbeing of students, and the promotion of positive relationships and

social skills, may provide greater improvement in children's academic and developmental growth. These resilience-linked traits improve students' ability to succeed both in school and outside of school, and set them up for a long, healthy, and productive life. The resources required to successfully implement these programs may appear cumbersome, but the benefits that improved school climate and connectedness drastically outweigh the costs. Additionally, it is often financially beneficial to spend money and academic resources on preventing poor outcomes rather than trying to spend money fixing deficiencies once they occur. A preventative focus in lieu of a reactive focus should become the norm as evidence mounts of the positive influences that strength-based and climate-focused educational programs have on student outcomes throughout an individual's lifespan.

Now that a link between school climate, school connectedness, and student resilience has been demonstrated, it is up to educators to determine how to strengthen these systems. With the knowledge that schools can strengthen resilience by developing traits such as social competence, promoting positive relationships between students and faculty, communicating high expectations in academic and social performance, and maximizing opportunities for meaningful participation, programs that emphasize these features should be explored and implemented (Brooks, 2006). Previous research has outlined crucial steps that every school can take when beginning to focus on school climate and connectedness. These steps include strengthening the role of the principal as a leader, developing systematic and individual practices that support interpersonal engagement, emphasizing positive relationships built on mutual respect and trust, emphasizing and communicating high expectations of students, communicating and enforcing fair and consistent disciplinary procedures, competent communication practices, and a transparent and democratic use of school resources that includes input from faculty, staff, students, their families,

and the community as a whole (Smith, Connolly, & Prysesky , 2014). The present study adds to the research on resilience by providing empirical evidence of the link between school climate and school connectedness and the resilience in students in the school, furthering the argument that a focus on school climate in addition to a focus on academic success can substantially improve the outcomes of children and adolescents both in school and beyond. These results highlight the importance of developing and implementing interventions that specifically target school climate and school connectedness. If the purpose of school is to educate children and provide an environment in which they can develop and grow into healthy and capable individuals, emphasizing the development of traits linked to resilience is an effective way to ensure that those children develop into healthy individuals.

The role of the school psychologist in engendering a positive school climate and connectedness is a multifaceted one. School psychologists are in a unique position to provide leadership and guidance in the process of promoting positive student engagement, effective communication practices, research and evidence-based intervention and disciplinary practices, providing knowledge through consultation on effective team-collaboration skills, as well as being within the system to personally engage students to gain an understanding of how they view their school either positively or negatively. As noted by Doll (2010), school psychologists can assist in the promotion a positive school climate by helping teachers and parents implement strategies to support students' self-regulatory skills, consulting on positive behavioral interventions and supports, identifying cultural and logistical barriers to family engagement, and by selecting appropriate survey instruments to assess school climate issues and effectively evaluating and drawing conclusions from the data. The effort to improve school climate is a collaborative one by nature, and requires buy-in from all levels of the school organization.

Evidence has demonstrated that a focus on improving school climate and connectedness is imperative given the potential to promote positive wellbeing in children and adolescents, as well as a prevention-focused tool that can instill resiliency in those who will face adversity throughout their lives.

Recommendations for Future Research

The present study provides empirical data to support the theoretical link between school climate, school connectedness, and resiliency in children and adolescents. While the theoretical foundations provide an indication that there may be a causal link between school connectedness, school climate, and the development of resilience, the present study was not designed to support that link. A future study may be able to firmly establish the causality between these factors by randomly assigning children to a positive and negative school climate, although the ethics of such a design may be cause for concern. This study has further highlighted the importance that a positive school climate can have in the healthy development of a child, and the deprivation of such an environment, even for a short time, could cause lasting harm in a child academically, socially, and emotionally. The reality of the current educational system in the United States is that there are many schools that already lack in the resources and capabilities to develop a positive climate, and these schools should be identified and used to implement school climate interventions to improve the outcomes of their students and gain additional information on the connections between schools and resilience.

While a causal connection would be beneficial to establish in order to lend further credibility to the need for a focus on preventative and strength-based academic programs, scarce resources would be better utilized in identifying the most appropriate and efficient means of providing a more supportive environment for children in the classroom. Future research on the

outcomes of students in these environments would benefit from the utilization of measurement tools specifically designed to track resiliency over time, and accurately assess students' perceptions of school climate and connectedness. While the CHKS provided invaluable data for the present study, the tool was designed to monitor the progress of students over time, and not to collect and analyze data for scientific conclusions. Analytically, a future research design using this or similar data would benefit from examining the school climate and school connectedness variables as a continuous variable rather than a categorical one. Additionally, a study utilizing structural equation modeling may provide further insight into the relationships between and among all of the variables discussed in this study. There are likely interactions between school climate, school connectedness, and the individual traits linked to resiliency that could be explored further.

Additionally, while the outcomes of the study highlight the strong connection between school climate, school connectedness, and resilience in children, there is still room for further exploration. Future research should focus on which components of school climate impact different traits associated with resilience. Cultural factors may play an important role in what is considered a positive environment for students, and may also impact how these environments influence students differently. There is already an empirical foundation on the importance of cultural responsiveness when implementing interventions, including in the areas of SWPBIS, and these factors also influence the relationship between students and their school climate. This study has provided valuable empirical evidence of the link between school climate, connectedness, and the development of resilience. However, there are still many areas left to be explored, and future research may further validate the notion that schools have a more complex and influential role to play in the development of children and adolescents into health and successful adults.

Summary and Conclusion

This paper focused on the exploration of potential links between school climate, school connectedness, and resilience in school-aged children. The historical literature base of each of these concepts was reviewed, as well as the theoretical underpinnings that connected these distinct concepts, including Mazlow's Hierarchy of Needs and Bronfenbrenner's Ecological Systems Theory. The purpose of this study was to determine if, and to what extent, traits linked to resiliency could be explained by a student's perceptions of school climate and/or feelings of school connectedness. Data from the California Healthy Kids Survey was used to explore these potential connections by breaking down resilience into four separate traits: empathy, problem-solving skills, self-efficacy, and self-awareness. The results of the present study indicated that student perception of school climate, and student perception of school connectedness, are strongly related to resilience. Each of the four resiliency-linked traits could be explained by student perceptions of climate and connectedness to a statistically significant degree. The results of the present study provided further evidence that school climate and school connectedness a substantially linked with resilience in school-aged children. These areas should be emphasized within the educational system as a way of developing students in to well-rounded and capable individuals who can bounce back from adversity. Finally, this paper provided possible avenues for future research, as well as suggestions for how to use this information to guide educational practice.

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